ACC Alvin Campus, aerial view, 1965

CHAPTER 2

DISCOVERY

DISCOVERY

CAMPUS PROFILE

STUDENT PROFILE

Fall 2015 Enrollment:

- 5,116 students
- 24% full-time enrollment
- 76% part-time enrollment
- 5 degrees offered completely online
- Dual Credit offered at many locations, including Alvin ISD (558 students) and Pearland ISD (742 students)

Gender

- 56% Female
- 44% Male

Age

- Average Age: 23
- Age Range: 14 to 85 years old
- 27% of students are under 18

Course Statistics

- 83% of students plan to earn an Associate's degree or transfer to a university
- 90% course completion rate
- The majority of students who transfered from ACC to another Texas university earned a GPA of 3.16 or higher*

The 2015 Community College Survey of Student Engagement showed that at ACC:

- 77% of students are first-generation
- 25% are married
- 36% have children
- 23% work at under 20 hours per week
- 53% work more than 20 hours per week
- 19% are non-native English speakers

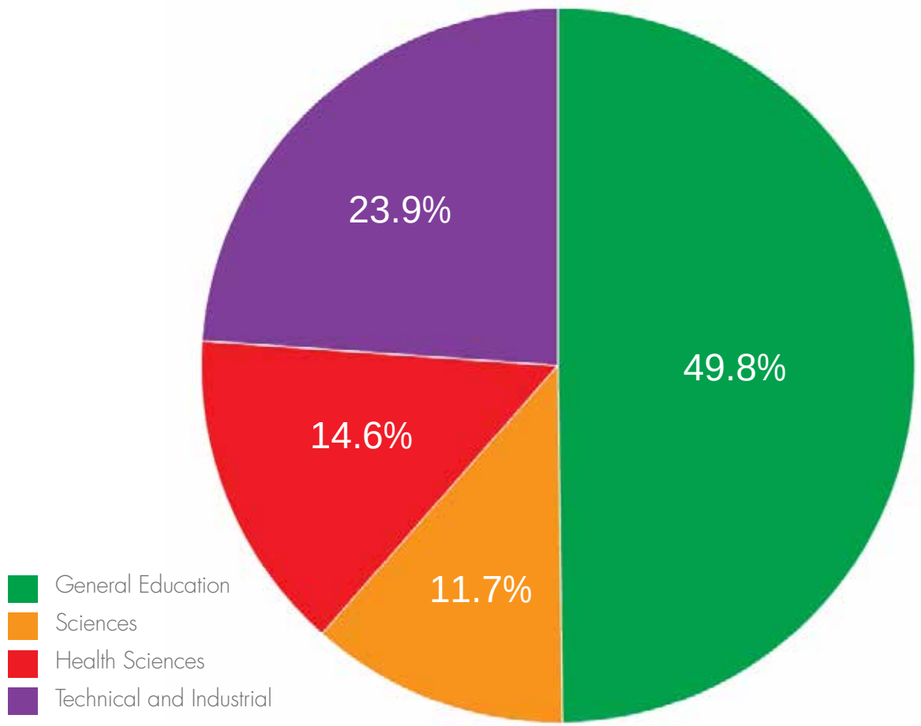
- 97% of ACC students would recommend ACC to a friend or family member
- 89% rate their entire college experience at ACC as "good" or "excellent"

Report to the Community, 2014
**Texas Higher Education Coordinating Board*

DEMOGRAPHICS

Alvin Community College offers a variety of programs for students from their taxing district and beyond. Programs at ACC include AA/AS/AAS degrees, transfer programs, high school dual credit, continuing education, certifications, and community offerings. In 2014 and 2015, ACC received several laudable rankings for excellence as a community college.

DISTRIBUTION OF STUDENT CONTACT HOURS



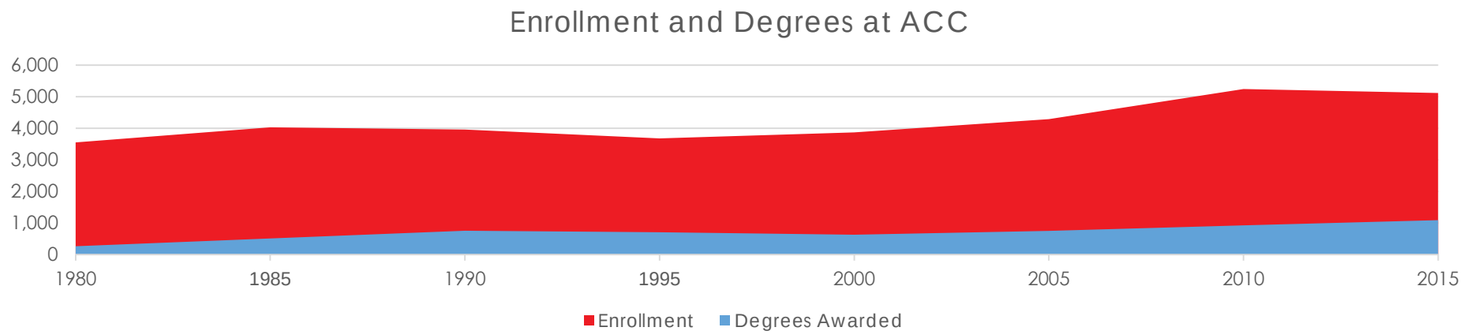
ACC
Alvin Community College

DISCOVERY

CAMPUS PROFILE

FACULTY PROFILE

- 107 full time faculty
- 177 adjunct faculty
- 11 full time administrative staff
- 58 full time professional staff
- 98 full time support staff



Alvin Community College offers Associate's degrees and/or Certifications in the following fields:

Activity Director Training – Online
Administrative Medical Assistant – Online
Adult Basic Education
Aesthetic Laser Technician
Art
Biological Science
Business Administration
Certified Nursing Assistant
Child Development/Early Childhood – (Administration)
Clinical Medical Assistant
CNC/Machinist
Commercial Truck Driving
Computer Technician – Online
Computer Training
Communications
Communications – Radio/TV Broadcasting
Computer Information Technology
Computer Information Technology – Computer Networking
Court Reporting
Court Reporting Scopist
CPR
Criminal Justice
Criminal Justice – Law Enforcement & Police Administration
Criminal Justice Basic Law Enforcement Academy
Criminal Justice Crime Scene Technician
Culinary Arts
Culinary Arts Management
Culinary Program
Dental Assistant
DCS – Adult Echocardiography
DCS – Non-Invasive Vascular Technology
DCS – Pediatric Echocardiography
Drama
Emergency Medical Technician Degree Program
Emergency Medical Technician - Advanced
Emergency Medical Technology - Paramedic
General Studies
Health Care Training Programs
Health Science
Helicopter Pilot Training
History
Human Resources
Human Services – Substance Abuse Counseling
Industrial Design Technology
Management
Massage Therapy
Mathematics
Medication Administration For CNA
Medication Update For Nurse Aide
Music Instrumental
Music Voice Concentration
Musical Theater
Neurodiagnostic Technologist (NDT)
NDT Intraoperative Neurophysiologic Monitoring (IONM)
Non-Certified Radiological Technician
Nursing ADN
Nursing Transition (LVN to ADN)
Nursing – Vocational
Office Administration – Administrative Assistant
Office Administration – Office Assistant
Office Administration – Administrative Support
OSHA Training
Paralegal
Pharmacy Technician
Phlebotomy Technician
Physical Science
Physical Therapy Aide (Hybrid)
Pipefitting
Polysomnography – Sleep Medicine
Process Technology
Professional Development
Psychology
Real Estate
Respiratory Care
Sociology
Special Interest Courses (Variety)
Sports & Human Performance
Teaching
Veterinary Assistant
Vocational Training
Welding

DISCOVERY

CAMPUS HISTORY

FROM AJC TO ACC

The Alvin Community College District was approved by the qualified voters of the Alvin Independent School District on November 2, 1948. Initially the College and public schools were in the same system and Alvin Junior College was part of Alvin High School. The first classes began in 1949.

Alvin Junior College moved to its present campus for the summer session of 1963. The 1971-72 academic year marked the beginning of a separate administration, tax district, and College Board, established to assume the management, control, and operation of a newly created Alvin Junior College District. By a vote of both the original district and voters of adjoining territories, the college district was enlarged to nearly twice its geographical size in 1974.

In 1975, in keeping with the concept of the College program to aid and identify the educational needs and aims of the greater Alvin area, the Board of Trustees changed the name of the institution to Alvin Community College.

The enrollment of Alvin Community College has grown from 134 students in 1949 to a record high of 5,736 for the Fall 2010. During the period of growth, Alvin Community College has had six presidents. Among ACC's notable alumni are Baseball Hall of Fame inductee Nolan Ryan, Congressman Randy Weber, and MLB pitcher Mike Stanton.

Alvin Junior College opens at Alvin High School

The first technical program is offered in drafting

The new Alvin Junior College campus is built on Mustang Road, featuring an Academic and Science building, and a Student Center. AJC also begins offering classes through Texas Department of Criminal Justice facilities.

1948 1950 1955 1960 1965 1970

Alvin Junior College library opens

Phi Theta Kappa Honor Society is chartered

Alvin Junior College has its first Nurses Pinning Ceremony and first Police Academy graduating class

Dr. A. Rodney Allbright takes office as College President; construction begins on a new $8 million building

Dr. Allbright receives CEO of the Year Award from the American Association of Community College trustees

The $19 million dollar Science/ Health (S) Building opens

ACC has its first Dual Degree graduate

Dr. A Rodney Allbright becomes President Emeritus; Dr. Christal M. Albrecht becomes 6th President of ACC

1975 1980 1985 1990 1995 2000 2005 2010 2015

KACC radio goes on the air; the Childcare/ Lab School opens

ACC dedicates a Military Memorial Wall

Nolan Ryan receives the first ACC Honorary Degree; the Board of Trustees shreds the $8 million bond mortgage

ACC celebrates its 50th anniversary with the grand opening of the Nolan Ryan Center

ACC offers the first Polysomnography degree in the state of Texas; Hurricane Ike devastates the campus

ACC is ranked in the top 10% of community colleges by the Aspen Institute; Blue, the dolphin mascot, returns to ACC

DISCOVERY

DOCUMENT REVIEW

STRATEGIC PLAN

Alvin Community College worked with the consulting group Collaborative Brain Trust to develop their 2016-2026 Strategic Plan, which was adopted by the Board of Regents on November of 2015.

Mission

Alvin Community College exists to improve the lives of its constituents by providing affordable, accessible, high quality, and innovative academic, technical, and cultural educational opportunities for the diverse communities it serves.

Vision

As a premier college that provides high quality academic, technical, and cultural programs, Alvin Community College's focus will be to promote student success, enhance quality of life, and support economic development.

Strategic Goals

Goal 1: Alvin Community College will develop itself as an evidence-based, data-driven organization to improve organizational efficiency and increase student achievement, completion, and success.

Goal 2: Alvin Community College will plan and develop a campus in the vicinity of the west side of the college taxing district, and address facilities' needs and technology upgrades for the existing campus.

Goal 3: Alvin Community College will develop branding that will be an effective representation of the institution and its mission, and will be used to market the college.

Goal 4: Alvin Community College will develop programs and partnerships to meet employment needs of the community.

Goal 5: Alvin Community College will maximize the acquisition of revenue, taking into consideration the interests and values of all stakeholders, and allocate them efficiently to the highest and best value for the institution.

Goal 6: Alvin Community College will strengthen its human resources capacity to promote a strategically-staffed and nimble organization that embraces change, supports open communication, and provides for ongoing professional development.

PROGRAM GAP ANALYSIS

ESMI consulting group conducted a gap analysis to determine what projected job growth and reduction will occur in the region around ACC. The sectors with increasing or decreasing job potential were compared to ACC's program offerings, and the ELT made several decisions about future program development:

- Grow and support Welding and Pipefitting programs
- Expand the Process Technology program
- Expand program offerings in Healthcare and Health Technology Services
- Explore the possibility of expanding the Culinary program to include other aspects of Hospitality
- Offer additional Certification and Continuing Education programs

Using this information, the planning team examined the existing buildings and classrooms for these programs, as well as potential space for new programs. Recommendations were made to create space for programs to begin or expand.

DISCOVERY

DOCUMENT REVIEW

STRENGTHS, CHALLENGES + OPPORTUNITIES

As a part of the Strategic Planning process, the Collaborative Brain Trust (an independent consulting firm) conducted a series of workshops, focus groups, and open online forums to gather input on the Strengths, Challenges, and Opportunities facing Alvin Community College.

In order to best align the Facilities Master Plan with ACC's Strategic Plan, the Stantec planning team examined this information to see which strengths, challenges, and opportunities could be addressed through the Facilities Master Plan.

The tables at right were created to compare feedback from internal stakeholders with feedback from external stakeholders. The planning team looked for areas of alignment between the two groups, and at which items could be directly (orange) or indirectly (blue) affected by facilities. The information obtained from these reports served as the starting point for conversations with stakeholders in the ACC community.

Partners & Community Relationships — STRENGTHS

Internal Perspective	External Perspective
The College has strong educational partners.	The College has several positive partnerships with external stakeholders, including the Dual-Credit program with high schools. Articulation agreements with 4-10 and University partners are viewed as positive.
Relationships with employers have ensured currency and responsiveness of many ACC programs.	Initiatives with local business and industry are positive. The College works in partnership with business and industry for the good of the region.
The College plays an essential role in the economic and community development of the area it serves. Regional economic development and community are pleased with recent ACC efforts.	The leadership of the College is active and valued in the community as an important asset to community efforts. The College is seen as a partner in Economic Development efforts.
Grants have allowed the College to extend its impact.	
The Foundation has been a strong partner in scholarship development, and has funded many scholarships.	
	Dual-Credit offerings and outreach efforts, such as site-based counselors, to ACC District high schools have increased.

Partners & Community Relationships — CHALLENGES + OPPORTUNITIES

Internal Perspective	External Perspective
The Foundation has yet to take a more significant role in resource development, beyond scholarships.	
Changes in state funding and regulations may reduce local control.	
The College has a strong history of partnerships developed to support its mission. Grants have primarily been department-based and reactionary.	
Staff time investment in foundation events have a low ROI; they are more "friend-raisers" than "fund-raisers."	
The College could increase funds through an annual campaign, capital campaign, and strategic meetings of the Foundation Director and the President with prospective major donors.	
A strategic review and revitalization of membership could improve the Foundation.	
Strategically designed partnership meetings are needed to develop new community partnerships.	
The College has an opportunity to use community events more strategically, to build awareness and improve ACC's image. Community events on campus can serve as a strategic component of outreach, recruitment, and community development.	
	Dual-Credit offerings need ongoing attention for continuous improvement.
	There are opportunities for additional articulation agreements with University partners.
	The role of site-based counselors is not yet fully developed.
	The College needs to remain at active player in economic development efforts in the region, though higher education planning and training for emerging businesses and industries.
Directly facilities related	
Indirectly facilities related	
Could be tied to facilities	

Educational Programs & Program Advisory Committees — STRENGTHS

Internal Perspective	External Perspective
The College provides affordable, high-quality programs for students in the region. Programs meet transfer and career-technical needs.	The College is a cost-effective, quality educational provider. Graduates are viewed as well-prepared. Local employers are eager to hire ACC graduates.
Program Advisory Committees are in place for most program areas.	Program Advisory Committee members are responsive to the College's requests for information. Some PACs are very active and engaged in providing advice for improvements. Business and industry is well-represented.
A Curriculum Committee is in place for refinement and development of curriculum.	
	ACC offers programs that are well-matched to many occupational opportunities in the region.
	Transfer agreements support transfer of students to various Texas community colleges and universities.
	Students who transfer to universities experience a similar level of success as those who are four-year students at the university.

Educational Programs & Program Advisory Committees — CHALLENGES + OPPORTUNITIES

Internal Perspective	External Perspective
The College's program review needs to be developed and data-informed. Programs are not comprehensively reviewed using data and outside, objective perspective to determine if they are relevant and up-to-date.	
The use of Program Advisory Committees to improve programs is not consistent across programs. Advice is not actively sought for program changes/improvements.	Some Program Advisory Committees are less active and engaged.
Career services, job placement, and graduate follow-up should be expanded.	
Program Advisory Committees are not uniformly strong. There is no process in place to evaluate the work of the PACs, and no standards for PACs across departments.	Program Advisory Committee improvements are needed. Student and graduate input should be included.
ACC has strong competition from neighboring colleges, universities, and proprietary schools. Facilities are a major factor in students' choices to attend other schools.	
Shifts in population, jobs, and industry require strategic program placement and development. ACC has not kept pace with regional development in recent years.	Career-technical programs need expansion in certain areas: process technology, welding, pipe-fitting, machining, retail, transportation, construction, culinary arts, hospitality, health care.
Programs are primarily designed and scheduled for traditional students: full time, daytime, and face-to-face.	ACC has limited scheduling for non-traditional students. "Cohort" approaches, evening classes, distance education, part-time, compacted, etc. are needed.
ACC does not have a clear plan to establish priorities and tie new program development and program improvement to budget planning. Investment in curriculum development, staffing, labs, and equipment is necessary.	
	Joint Program Advisory Committees - with ISD representatives or by program area - may be a possibility.
Directly facilities related	
Indirectly facilities related	
Could be tied to facilities	

Changes & Trends Impacting College — NEXT 5 YEARS

Internal Perspective	External Perspective
An increasing proportion of post-high school education	
The value to employers of portable credentials (degrees and certificates)	
Importance of retraining and currency for incumbent workers	
Increasing cost of university education makes community colleges an affordable option	
Increase in veterans and non-traditional, working adult students	Influx of non-traditional students, including veterans with unique needs
Increase in under-prepared and ESL/ELL students	Increase in ESL/ELL students
Increase in mental health and discipline issues with students	
Impact of rapid changes in technology on instruction	Technology changes in industry
Increased use of social media and implications for communication with students	Technology changes in life: cloud, social media
Population growth	Housing, Development, Business and industry growth
New highways	Expanded transportation infrastructure
Competition from online competitors, within and outside the region	Competition from other community colleges, universities, and private institutions
Importance of flexible scheduling and accelerated options for working students and student parents	Need for classes/scheduling for working adults
Increasing proportion of student enrollments in Dual-Credit and prison program	
More than half the student population is now from outside the College District	
	Need for Project Managers across many occupations
	Changes to health care from Affordable Care Act, cost of health care
	Government involvement, policy changes, rate of state control
	Performance-based funding; loss of local control
	Need to align with K-12 and Universities
Directly facilities related	
Indirectly facilities related	
Could be tied to facilities	

Campus Image, Reputation, Culture, Infrastructure — STRENGTHS

Internal Perspective	External Perspective
ACC has a strong commitment to student success. Personal attention to students is a core attribute.	
ACC faculty/staff are at the heart of the College's success. They have a caring attitude and commitment to others.	Employees are caring and have a strong commitment to students. Faculty and staff are committed to student success and go out of their way to meet student needs.
There is a culture of respect and engagement with students.	
The size of the College is a positive; it allows for responsiveness and creates a welcoming atmosphere.	ACC employees are friendly and personable toward students.
The College is well-known and has a positive image in the community.	The College is an asset to the community.
ACC seeks out and applies input from employees to improve the College.	
The new Science Building is a strength. Further facilities improvements would be an advantage for programs and for marketing.	
	The undertaking of a five-year strategic plan is a forward move on ACC's part. It demonstrates strong leadership.
	ACC is responsive to requests to work on new initiatives, partnerships, training, and articulation with other educational providers.
	The new President is well-received and seen as a "breath of fresh air."

Campus Image, Reputation, Culture, Infrastructure — CHALLENGES + OPPORTUNITIES

Internal Perspective	External Perspective
Community members and potential students may have stereotypes or biases about community colleges in general, which influence their opinion of ACC, specifically.	ACC suffers from the community college stigma. Some in the community may view ACC as "blue collar" or "second chance," especially if they have not had direct contact with ACC.
There are mixed opinions, internally, about the named of the College - it seems "Alvin-centric." Marketing to explain "who we are/what we do" is needed.	There are mixed opinions in the community about the name of the College and a possible name change. Some feel is is "Alvin-centric." Others feel a name change would ignore the history and legacy of ACC.
Because of its long and rich history, some worry that ACC values tradition over innovation. Relying on the past reputation to drive marketing may not be effective.	ACC is, at times, slow to react to changes in the workplace and the community. Programs that no longer meet job demand are not always reduced or eliminated.
New branding/marketing and new avenues of delivery are needed.	
Many of the campus facilities are in need of renovation or repair. The appearance of the facilities and parking lots leads to a poor image of ACC.	
Communication between departments is inconsistent and inefficient.	
ACC has not formalized an integrated planning process. Internal procedures for employee engagement are under-developed, and plans often "roll-over" from year to year, without responding to changing needs.	
Operational processes lack efficiency and consistency across departments. There is not a formal process for cross-campus and cross-department alignment and collaboration. The College is siloed.	
The research department is under-utilized for informing College direction and decisions.	
Employees seek meaningful involvement in planning and budgeting; planning processes do not always drive budget allocations nor grant development.	
There is an opportunity for strategic outreach, image-building, and community awareness. This applies to ACC as a whole, and also individual programs, services, and sites.	More aggressive, socially appealing marketing efforts are needed.
	There is a need to "mend relations" from the past administration.
Directly facilities related	
Indirectly facilities related	
Could be tied to facilities	

Teaching & Learning; Recruitment; Academic & Student Support Services — STRENGTHS

Internal Perspective	External Perspective
Most faculty are competent in their subject area and focused on student success.	ACC has a "holistic approach to being 'student-centered'" for student success. Teaching and learning systems support student success.
Faculty and staff attend workshops and contribute positively toward improving programs.	
The quality of teaching and experience of faculty are strong.	ACC is generally viewed as having high-quality classroom teaching.
Small class sizes are a strength.	
Online and hybrid courses have expanded access for ACC programs.	
Student Services personnel are committed and effective.	Counselors and student services staff work cooperatively to support student success.
The Enrollment Services Center is a "one-stop" for student services, according to students and staff.	
The College has implemented and applied results from annual surveys, such as the CCSSE and the annual employee survey. These have provided meaningful feedback for improvement in several areas.	
Advising and orientation are assets for those students who participate. These tools are not mandatory. Students who struggled admitted they did not attend these sessions.	
New transfer relationships and 2+2 programs may provide new opportunities for students. Students may increasingly seek general education and transfer preparation from ACC, particularly if they have a clear path to follow.	
	ACC provides a wide array of services with limited resources.

Teaching & Learning; Recruitment; Academic & Student Support Services — CHALLENGES + OPPORTUNITIES

Internal Perspective	External Perspective
In some cases, Student Services staffing is insufficient to serve increasing needs of traditional and non-traditional services.	
Stagnant enrollment trends do not reflect changing overall population; new outreach methods are needed.	Recruitment of existing and new student populations is a challenge. The image of ACC is a barrier. Additional student populations that could be recruited include working adults, veterans, high school graduates, and the Hispanic community.
Technology planning is needed to support both student systems and instruction. ACC needs to understand and plan for changes to instructional technology, including use and integration of mobile devices.	Classes need to be taught with current teaching methods.
Instructional lab equipment and other classroom technology is lacking or outdated.	
The expansion of UCHL into lower-division coursework provides an opportunity that ACC should take advantage of; UCHL expressed interest in partnering.	
The College lacks sufficient data and analysis related to student success, which is necessary to develop and evaluate strategies and interventions. Retention, progression, completion are not tracked, analyzed, or widely-shared. Information that does exist is not applied to the improvement of instruction.	
There is no Early Alert/Academic Probation system at the College.	
The Distance Education program has additional opportunities for growth and improvement. Student success in these programs needs critical analysis. Additional support and services for online students is needed.	More distance education is needed. On-line courses are limited.
The College can communicate with students more effectively through social media.	The use of social media is increasingly important.
The services and "flow" of the Enrollment Services Center should be reviewed and improved, to provide a consistent, simplified pathway for students. Lack of customer service skills and the need for repeated trips were cited by students.	Student support services could be more user-friendly. The enrollment process is not always clear.
Career counseling is not a strong component of the new student process.	
Traditional structures and processes do not always address the needs of non-traditional adult learners. Child care, repeat trips to campus, scheduling of services, and activities primarily for younger students were cited.	Outreach to and recruitment of unemployed and under-employed adults is a challenge.
Incoming students are increasingly underprepared.	
The ESL/ELL population is increasing.	Support for ESL/ELL students is an area of need.
Many students are first generation college students.	Support for first generation students is an area of need.
The College does not have a strategic recruitment, outreach, and enrollment plan to identify new markets, and to recruit and support new populations.	More presence of ACC faculty and staff on K-12 campuses is needed to expand the number of students attending ACC from local K-12 districts.
Students are not accessing financial aid services as much as they may be entitled to. Pell grants may be under-utilized by students in need.	
Community events on campus can serve as a strategic component of outreach, recruitment, and community development.	
	On-site counselors at area high schools need a more fully developed role. They could be used more effectively. Needs include financial aid sessions and career counseling.
	The website needs to be designed as a strategic communication tool, with current program information and help for students seeking enrollment.
	Faculty needs professional development to be able to employ current teaching methods.
	Curriculum needs to be developed to allow students to move smoothly into upper division coursework; new requirements for a 60-unit degree pose a challenge.
	Quality faculty performance reviews are needed, to provide remediation or terminate those that are outdated and/or not student-friendly.
Directly facilities related	
Indirectly facilities related	
Could be tied to facilities	

Stantec

DISCOVERY

CAMPUS INVENTORY

CAMPUS ASSETS

Campus Facts

- Established as Alvin Junior College in 1948
- 16 buildings totaling 470,981 GSF
- 114 acres
- Sports fields, totaling 5,290 SF

Campus Buildings

A - Student Services Center, Administration, Library, Cyber Lab
B - Administration, Fine Arts, Art Gallery
C - Childcare, Paralegal, Human Resources, Human Services
D - Business Programs, Industrial Technology
E - Student Center, College Store
F - Fitness Center
G - Liberal Arts Center
H - Continuing Education Workforce Development, Allied Health Center
I - Art: Metals + Jewelry
J - Art: Ceramics/Sculpture
K - Broadcast Communications, Court Reporting
M - Shipping + Receiving
N - Technical Programs, Criminal Justice, Police Academy
R - Nolan Ryan Center
S - Science, Health Science
T - Transportation, Maintenance

CAMPUS CONTEXT

Alvin Community College (ACC) is located in the community of Alvin, approximately 30 miles south of Houston. Originally named Alvin Junior College and located at nearby Alvin High School, ACC moved to its current site in 1965. The original campus buildings reflect this era of development in community colleges, with some changes to style introduced in newer buildings.

ACADEMICS

Academics on the ACC campus are primarily housed in buildings by discipline, concentrated in Buildings C, D, G, I, J, K, N, and S.

ADMINISTRATION

Administrative spaces can be found in nearly all academic buildings, with most administrative functions housed in B Building. Offices of Deans can also be found in Buildings G and S.

OPERATIONS + SUPPORT

ACC operations and support are primarily housed in M and T Buildings. Each building also contains storage and maintenance areas.

STUDENT LIFE

The Student Center, in E Building, is the primary location for Student Life activities for ACC. The E Building includes an area for student activities and games, as well as a small eatery. This building is also home to the bookstore.

ATHLETICS & RECREATION

The ACC campus provides two ball fields, two youth soccer fields, and a set of tennis courts. The Fitness Center in F Building includes locker rooms and showers. There is also a walking/jogging path that encircles the western side of the campus.

SITE & OPEN SPACE

ACC's campus is approximately 35% open land, providing some opportunities to organize and define spaces for a more distinctive campus experience. The existing buildings have already shaped a small courtyard area with pleasant shade from trees. The remainder of the open space is primarily flat, with open grassy areas and trees, cut through by roads, small out-buildings, and parking lots. There is a detention pond at the southern end of the site.

OPPORTUNITY SITES

A master plan should provide direction for future development, even when the specifics are not yet determined. There are several locations on the Alvin Community College Campus where opportunities exist for future development.

DISCOVERY

CAMPUS INVENTORY

KEY

- Developable Site
- Academic
- Administrative
- Student Life
- Athletics and Recreation
- Operations + Support

Stantec

DISCOVERY

FACILITIES ASSESSMENT

Building Inventory and Facility Condition Index								
BUILDING	USE	YEAR BUILT	ADDITIONS*	AREA (sf)	FLOORS	CRV	2016 FCI	2026 FCI
A Building	Library, Student Services, Offices	1977		44,500	2	$11,846,438	9.5%	13.4%
B Building	Classrooms, Art Gallery, Administration	1977		45,821	2	$11,215,260	9.0%	12.7%
C Building	Classrooms, Childcare, Human Resources	1977		43,746	2	$8,552,343	5.9%	8.3%
D Building	Classrooms, Welding Lab	1977		34,502	2	$12,895,123	6.0%	8.0%
E Building	Student Center, Bookstore, Cafe	1963	1977	19,129	1	$4,839,637	13.5%	19.5%
F Building	Fitness	1963	1977, 2010	29,121	1	$5,190,818	11.1%	15.6%
G Building	Classrooms, Offices, Veterans' Lounge	1963	1985	35,021	1	$7,652,089	13.6%	19.1%
H Building	Classrooms, Health Center, Campus Police	1963	1966, 2008	15,242	1	$5,696,698	8.2%	11.6%
I Building	Jewelry/Metals Studio	1963		862	1	$381,651	10.0%	14.1%
J Building	Art/Ceramics Studio, Offices	2008	2014	4,800	1	$2,014,800	3.1%	4.3%
K Building	Classrooms, Communication Studios	Before 1990†	1992, 2013	21,640	1	$8,087,950	7.6%	10.7%
M Building	Shipping + Receiving	1980	2013	5,000	1	$1,006,20	23.0%	32.4%
N Building	Classrooms, Police Academy, Gun Range	1984		25,091	1	$9,377,761	15.8%	22.3%
R Building	Nolan Ryan Museum + Meeting Center	1996		12,050	1	$3,810,813	5.2%	7.4%
S Building	Classrooms, Science + Clinical Labs	2007	2014	109,614	2	$38,447,111	0.4%	0.6%
T Building	Transportation Storage + Maintenance	1993		18,753	1	$4,421,020	3.7%	5.3%
Greenhouse	Greenhouse			600	1	$108,000	19.1%	27.0%
Observatory	Astronomy Telescope			200	1	$80,000	5.8%	8.2%
Baseball	Sports Field + Fieldhouse	1994		3,862	1	$6,758,500	4.9%	6.8%
Softball	Sports Field	1998		1,436	1	$2,010,400	5.0%	7.1%

**Most buildings on the ACC campus were damaged in Hurricane Ike and repaired in 2010*
†Building was purchased by ACC in 1992

Good (0-5.0%)	Fair (5.1-10.0%)	Poor (10.1% or more)

FACILITIES ASSESSMENT

Stantec performed a facilities assessment on the sixteen buildings, as well as the sporting fields, currently at the ACC existing campus. The purpose of this study was to:

- Provide an inventory of ACC's buildings to allow for quick access to facilities information.
- Determine the general condition of the facilities and provide the data in a concise format, allowing quick determination of the current replacement value and condition of the facilities.
- Determine a Facilities Condition Index (FCI) for the buildings at ACC. The FCI is a benchmark index that rates the condition of existing buildings and is used by facilities managers to quantify and prioritize building optimization projects for capital planning purposes.

DEFINITIONS

Current Replacement Value (CRV)

The CRV is the cost to construct a replacement building in today's dollars, based on the square footage of the current structure and the estimated current construction cost for that type of structure.

Deferred Maintenance Backlog (DMB)

DMB represents the total value of projects that will require attention within the next five years. This value is included to help determine the investment required to repair and/or replace problem items before they become critical.

Facilities Condition Index (FCI)

Simply put, the FCI is the current DMB divided by the CRV. The resulting number is compared against nationally accepted standards and used to determine the condition of the facilities.

The Association of Higher Education Facility Officers (APPA) – the organization whose standards were used to develop this system of facility assessment – recommends that the FCI for any given building should not exceed 5% for the building to be considered in "Good" condition. The rating of "Fair" (5-10%) indicates that the building requires some attention to bring it up to standard, with some problems areas potentially requiring immediate attention. The rating of "Poor" (>10%) indicates that the building needs urgent attention to prevent the existing problems from affecting other building systems and compounding future repair costs annually due to inflation.

The entirety of this study is available in the Appendix of this report.

Facilities Condition Index (FCI) Rating

$$FCI = \frac{\text{Maintenance \& Repair of Deficiencies of the Facility}}{\text{Current Replacement Value of the Facility (2016)}}$$

Good (0-5.0%)	Fair (5.1-10.0%)	Poor (10.1% or more)

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

A BUILDING

FCI INDEX: **9.5%**

COST SUMMARY

CRV	Total Cost of Projects
$11,846,438	$1,183,635

PROJECTS SUMMARY

- Upgrading the restrooms, including meeting ADA criteria.
- Upgrading from single-pane to double pane glazing.
- Repair or replacement of the aluminum stair rails and guard rails.
- The elevator is 40 years old and will eventually become impractical to maintain. Replacement should be considered within the next 3-4 years to ensure continuing service. Enlarging the elevator for additional freight capacity is likely not practical, but should be evaluated.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- The roof is generally in good condition and with continued routine maintenance should remain serviceable for several years.
- Consider replacement of exposed aggregate paving at first and second floor arcades and breezeways, and at stair treads.
- Consider installation of fire sprinkler system.
- Replacement of cast iron sanitary piping.
- Replacement of the two air handling units.
- Replacement of original variable air volume distribution units.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Install automatic controls on exhaust fans.
- Install sump pump in elevator pit.
- Reroute sanitary drain piping in first floor breakroom (cannot run to vent piping).
- Replace failing lighting control contactors and controls.
- Install exhaust fans for custodial rooms.
- Repair subsurface drainage piping system at exterior walls.
- Upgrade lighting at exterior stairs.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Perform testing of all emergency lighting including egress lighting and exit signs.

B BUILDING

FCI INDEX: 9.0%

COST SUMMARY

CRV	Total Cost of Projects
$11,245,260	$1,198,233

PROJECTS SUMMARY

- Upgrading the restrooms, including meeting ADA criteria.
- Upgrading from single-pane to double pane glazing.
- Repair or replacement of the aluminum stair rails and guard rails.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased se-curity and convenience.
- The roof is generally in good condition and with continued routine maintenance should remain serviceable for several years.
- Consider replacement of exposed aggregate paving at first and second floor arcades and breezeways, and at stair treads.
- Consider installation of fire sprinkler system.
- Address moisture encroachment from high earthen berms.
- Address noise transmission issues from orchestra/band hall to adjacent spaces.
- Inspect and make operable the smoke relief hatches over the auditorium stage.
- Replacement of air handling unit #5 above the stage.
- Replacement of original variable air volume distribution units.
- Replacement of cast iron sanitary piping.
- Replacement of halogen house lighting in the auditorium.
- Replacement of failing lighting control contactors and controls.
- Address infiltration of moisture at exterior walls covered by the earthen berms. Repair subsurface drainage piping sys-tem at exterior walls.
- Repair outside air intake system to original designed func-tion.
- Install automatic controls on exhaust fans.
- Install exhaust fans for custodial rooms.
- Replace failing plumbing isolation valves.
- Upgrade lighting at exterior stairs.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Replace the original drinking fountains.
- Perform a breaker coordination study and adjust/replace breakers that are tripping mains.
- Perform testing of all emergency lighting including egress lighting and exit signs.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

C BUILDING

FCI INDEX: **5.9%**

COST SUMMARY

CRV	Total Cost of Projects
$8,552,343	$975,089

PROJECTS SUMMARY

- Upgrading the restrooms, including meeting ADA criteria.
- Upgrading from single-pane to double pane glazing.
- Repair or replacement of the aluminum stair and guard rails.
- Repair or replacement to exterior steel doors that bind.
- The breezeway elevator is 40-years old and will eventually become impractical to maintain. Replacement should be considered within the next 3-4 years to ensure continuing ser-vice. Enlarging the elevator for additional freight capacity is likely not practical, but should be evaluated.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- The roof is generally in good condition, but a few deficiencies need to be addressed. With continued routine maintenance the roof should remain serviceable for several years.
- Consider replacement of exposed aggregate paving at first and second floor arcades and breezeways, and at stair treads.
- Consider installation of fire sprinkler system.
- Address moisture encroachment from high earthen berms.
- Repair access holes in exterior walls above plaster soffit.
- Provide air balancing to improve distribution within the building.
- Repair outside air intake system to original designed function.
- Replacement of original variable air volume distribution units.
- Replacement of air handling units.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Install automatic controls on exhaust fans.
- Install sump pump in elevator pit.
- Replace failing plumbing isolation valves.
- Replace failing lighting control contactors and controls.
- Repair subsurface drainage piping system at exterior walls covered by the earthen berms to address moisture infiltration.
- Route clothes dryer exhaust in day care to the exterior.
- Install exhaust fans for custodial rooms.
- Upgrade lighting at exterior stairs.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Reroute rooftop unit condensate line (currently to sink).
- Perform testing of all emergency lighting including egress lighting and exit signs.

D BUILDING

FCI INDEX: **6.0%**

COST SUMMARY

CRV	Total Cost of Projects
$12,895,123	$797,764

PROJECTS SUMMARY

- Upgrading the exterior-access restrooms, including meeting ADA criteria.
- Upgrading second-floor interior door hardware to lever type that would be ADA-compliant.
- Replacing stained ceiling tiles and rusted ceiling grid after determining that cause of water leak has been repaired.
- Upgrading from single-pane to double pane glazing.
- Repair or replacement of the aluminum stair rails and guard rails.
- Repair or replacement to exterior steel doors that bind.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- The roof is generally in good condition with only a couple of deficiencies that need to be addressed. With continued routine maintenance the roof should remain serviceable for several years.
- Consider replacement of exposed aggregate paving at first and second floor arcades and breezeways, and at stair treads.
- Consider installation of fire sprinkler system.
- Replacement of air handling units.
- Replacement of original variable air volume distribution units.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Provide ventilation for machine shop and print shop.
- Install automatic controls on exhaust fans.
- Replacement of failing lighting control contactors and controls.
- Replacement of failing plumbing isolation valves.
- Address infiltration of moisture at exterior walls covered by the earthen berms. Repair subsurface drainage piping system at exterior walls.
- Install exhaust fans for custodial rooms.

CONTINUED NEXT PAGE

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

D BUILDING CONTINUED

PROJECTS SUMMARY

- Evaluate the exhaust system in the welding shops to verify the quantity of air removed is adequate and the make-up air system is functioning.
- Upgrade exhaust system in welding shop 2.
- Separate boiler from the refrigeration machine room (chillers).
- Upgrade exhaust system in welding shop 2.
- Separate boiler from the refrigeration machine room (chillers).
- Replace hot water and chilled water system pumps.
- Perform study of chilled and hot water supply loop to validate the differential pressure setpoints. Rebalance the system to most efficient operation settings.
- Perform test on primary transformer and medium voltage switchgear at plant and replace as necessary.
- Upgrade electrical capacity at plant switchgear.
- Repair subsurface drainage piping system at exterior walls.
- Upgrade lighting at exterior stairs.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Provide exhaust and additional air conditioning for print shop.
- Perform testing of all emergency lighting including egress lighting and exit signs. Replace and/or add devices as needed.

E BUILDING

FCI INDEX: **13.5%**

COST SUMMARY

CRV	Total Cost of Projects
$4,839,637	$768,907

PROJECTS SUMMARY

- Consider bringing all restrooms into ADA-compliance, including enlargement of kitchen restroom.
- Upgrading remaining twist-knob door hardware to lever type that would be ADA-compliant.
- Upgrading from single-pane to double pane glazing.
- Consider additional exit doors from the Meeting Room and Student Center.
- Covering of kitchen terrazzo flooring. Covering of college store stained concrete flooring.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- The roof is generally in good condition with only minor deficiencies. With continued routine maintenance the roof should remain serviceable for several years.
- Consider installation of fire sprinkler system.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Replacement of air handling units.
- Replacement of kitchen exhaust fan. Survey duct/hood and clean as required.
- Replacement of secondary chilled water pump.
- Provide additional combustion air to existing boiler room and evaluate boiler room pressurization (there has been an exhaust duct added to room which may affect combustion).
- Separate boiler from air handler room with rated walls.
- Install automatic controls on exhaust fans.
- Provide additional air conditioning to kitchen.
- Replacement of failing plumbing isolation valves.
- Provide additional capacity in electrical power system.
- Consider replacement of electrical feeder to Bldg. “I” to ensure sufficient future power.
- Upgrade generator transfer switch to automatic-type for code compliance.
- Provide standby generator for disaster staging, including a feeder to the water well.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Perform testing of all emergency lighting including egress lighting and exit signs. Replace and/or add devices as needed.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

F BUILDING

FCI INDEX: **11.1%**

COST SUMMARY

CRV	Total Cost of Projects
$5,190,818	$722,293

PROJECTS SUMMARY

- Consider piping all roof drains and AC condensate lines to underground piping to ensure against water intrusion into the building and soft grade at building perimeter.
- Consider bringing all restrooms into ADA-compliance, including enlargement of kitchen restroom.
- Upgrading remaining twist-knob door hardware to le-ver type that would be ADA-compliant.
- Upgrading from single-pane to double pane glazing.
- Consider additional exit doors from the Meeting Room and Student Center.
- Covering of kitchen terrazzo flooring. Covering of col-lege store stained concrete flooring.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security.
- The roof is generally in good condition with only minor deficiencies. With continued routine maintenance the roof should remain serviceable for several years.
- Consider installation of fire sprinkler system.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Replacement of air handling units.
- Replacement of kitchen exhaust fan. Survey duct/hood and clean as required.
- Replacement of secondary chilled water pump.
- Provide additional combustion air to existing boiler room and evaluate boiler room pressurization (there has been an exhaust duct added to room which may affect com-bustion).
- Separate boiler from air handler room with rated walls.
- Install automatic controls on exhaust fans.
- Provide additional air conditioning to kitchen.
- Replacement of failing plumbing isolation valves.
- Provide additional capacity in electrical power system.
- Consider replacement of electrical feeder to Bldg. “I” to ensure sufficient future power.
- Upgrade generator transfer switch to automatic-type for code compliance.
- Provide standby generator for disaster staging, includ-ing a feeder to the water well.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed ac-count of the performance of fans and coils.
- Perform testing of all emergency lighting including egress lighting and exit signs. Replace and/or add devic-es as needed.

G BUILDING

FCI INDEX: **13.6%**

COST SUMMARY

CRV	Total Cost of Projects
$7,652,089	$1,118,298

PROJECTS SUMMARY

- Consider bringing all restrooms into ADA-compliance, including enlargement where necessary.
- Upgrading from single-pane to double pane glazing.
- Consider additional exit doors from the larger class-rooms and student lounge.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security.
- Consider upgrading original veneer doors to updated plastic laminate surfaced doors with all new hardware. Or replace twist-knob door hardware to lever type for ADA-compliance.
- The roof is generally in good condition with no deficien-cies. Provide regularly scheduled removal of leaves.
- Provide access panels in outdoor deck to facilitate cleaning of under-deck site drains.
- Consider installation of fire sprinkler system.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Replacement of air handling units.
- Replacement of air distribution units (VAVs).
- Provide return air path from rooms without routing air through corridors.
- Update boiler controls and sequence.
- Replace original plumbing fixtures.
- Provide additional combustion air to existing boiler room and evaluate boiler room pressurization (there has been an exhaust duct added to room which may affect com-bustion).
- Separate boiler from air handler room with rated walls.
- Install automatic controls on exhaust fans.
- Replacement of failing plumbing isolation valves. Pro-vide additional valves to facilitate piping maintenance.
- Provide additional capacity in electrical power system.
- Upgrade generator transfer switch to automatic-type for code compliance.
- Provide standby generator for disaster staging, includ-ing a feeder to the water well.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed ac-count of the performance of fans and coils.
- Survey lighting levels in rooms to determine whether rooms are brighter than recommended/ necessary
- Perform testing of all emergency lighting including egress lighting and exit signs. Replace and/or add devic-es as needed.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

H BUILDING

FCI INDEX: **8.2%**

COST SUMMARY

CRV	Total Cost of Projects
$5,696,698	$393,952

PROJECTS SUMMARY

- Correct thin gravel areas on roof.
- Address recessed brick soldier course at top of exterior walls to eliminate recessed brick that likely is allowing water penetration into the walls.
- Remove invasive tree roots or even the entire tree where very close to the building foundation.
- Make repairs to foundation corners with minor cracking. Cut-in vertical expansion joints near the corners of exterior brick walls.
- Correct offsets (trip hazards) in concrete paving at entries.
- Make minor adjustments to restrooms to meet ADA-compliance. Consider enlarging police department restroom for ADA compliance.
- Replace original exterior aluminum windows with new fixed aluminum storefront system with double pane tinted glazing.
- Upgrading existing aluminum storefront from single-pane to double pane tinted glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Consider upgrading original plastic laminate and wood veneer doors (now painted) to updated plastic laminate surfaced doors. Existing operating hardware is likely salvageable.
- Consider installation of fire sprinkler system.
- Correct sanitary drain piping configuration in breakroom. Currently pumping waste to another room's vent piping.
- There is an existing acid neutralization tank that has drain piping connected but is not permanently connected to the sanitary sewer serving the building. The tank should be removed and the sanitary drain permanently connected to the sanitary sewer.
- New restrooms need sanitary piping inspected by camera and repaired as necessary.
- Replace internally lined HVAC ducts for cleaner air.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Connect roof-top units to DDC controls system.
- Repair outside air intake system to original designed function.
- Replacement of air handling units.
- Replacement of air distribution units (VAVs).
- Install automatic controls on exhaust fans.
- Update boiler controls and sequence.
- Provide additional combustion air to existing boiler room and evaluate boiler room pressurization (there has been an exhaust duct added to room which may affect combustion).
- Separate boiler from air handler room with rated walls.
- Replacement of failing plumbing isolation valves. Provide additional valves to facilitate piping maintenance.
- Reroute return air path so it does not flow through corridors.
- Provide additional breaker space in electrical panels where needed.
- Upgrade generator transfer switch to automatic-type for code compliance.
- Repair isolation damper and air distribution in duct of roof-top unit serving Room H124.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey for detailed account of the performance of fans and coils.
- Survey lighting levels in rooms to determine whether rooms are brighter than recommended or necessary (operating costs).
- Perform testing of all emergency lighting including egress lighting and exit signs. Replace and/or add devices as needed.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

I BUILDING

FCI INDEX: **10.0%**

COST SUMMARY

CRV	Total Cost of Projects
$381,651	$50,708

PROJECTS SUMMARY

- Add a second direct exit door from the main work area.
- Consider a lockable security door for the small of-fice/tool room. (door has been removed).
- Both indoor and outdoor work space is crowded, the outdoor space to the point of poor circulation.
- Many penetrations, abandoned windows, and poor patching in two exterior masonry walls should be addressed.
- Remove and replace metal roofing panels over covered work area. Rework flashing between main building roof and metal roofing panels (water is en-tering at this juncture and rusting the panels).
- Provide metal fasteners and joist hangers for wood framing at covered outdoor work areas. Nailing is insufficient. Clean and treat rusted beam support brackets at pipe columns.
- Make corrections to front entry stoop for ADA-Compliance.
- Make corrections to outdoor covered work area entry ramp for ADA-Compliance.
- Remove obstructions to wheelchair circulation in outdoor covered work areas.
- Replace rusted outdoor storage units.
- Upgrade the single restroom to comply with ADA.
- Consider adding a second restroom (one each for male and female).
- Provide knee-space at sink cabinet (involves relo-cating water heater tank).
- Consider installation of fire sprinkler system at inte-rior and outdoor covered work area.
- Clean and recoat epoxy floor in main work area. Remove VCT and epoxy coat the small office/tool room.
- Replace VCT in restroom with seamless flooring.
- Replace rusted and damaged fencing.
- Resurface asphalt in immediate area of facility.
- Provide proper, dedicated hoods with roof discharge for the heat and fume producing tasks in-volved with jewelry production.
- Provide an air conditioning system with adequate outside air for exhaust make-up. Consider roof mounted unit.
- Provide exhaust for restroom.
- Update electrical equipment.

J BUILDING

FCI INDEX: **3.1%**

COST SUMMARY

CRV	Total Cost of Projects
$2,014,800	$159,800

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Replace room I.D. graphics plaques that do not comply (no Braille).
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- The roofing panels generally are in good condition, but there is evidence of water leaking into the masonry walls below, most likely from the flashing interface of the roofing panels and the metal panels on the back of the low parapet walls. The flashing needs to be removed and improved in order to protect the walls from long-term deterioration.
- Remove rust from steel brick lintels and repaint with rust-preventative paint. Remove damaged mortar at lintel bearing joints, and replace with matching sealant.
- Concrete stoop at north entry should be re-built to be essentially level.
- Consider installation of fire sprinkler system to protect the building.
- Replacement of original pneumatic HVAC controls with new direct digital controls.
- Repair outside air intake system to original designed function.
- Schedule replacement of air handling units for 8-10 years from now.
- Consider providing fixed-ladder access service platform for AHUs above the kitchen ceiling. Current access makes routine maintenance very difficult.
- Upgrade the solids interceptors (plaster traps) to a system that will prevent more of the clay solids from entering sink drain lines.
- Upgrade PVC exhaust system in glazing room to a properly designed and adequately sized commercial fume hood unit made for the purpose of fume extraction. Provide adequate make-up air for the room.
- Review the design requirements of the glazing room regarding fire rating vs chemicals used and update facility as necessary.
- Upgrade the exhaust system in the outdoor kiln room.
- Raise floor outlets around wet areas for safety and to avoid breaker tripping. Provide additional outlets in order to avoid use of multi-cords for student equipment.
- Provide additional capacity in electrical power system.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

K BUILDING

FCI INDEX: **7.6%**

COST SUMMARY

CRV	Total Cost of Projects
$8,087,850	$605,180

PROJECTS SUMMARY

- The foundation should be stabilized before proceeding with any other repairs or upgrades:
- Make minor roofing repairs as reported.
- Make repairs to extensively cracked exterior brick.
- Upgrade interior and exterior door hardware.
- Repair cracks in concrete paving.
- Upgrade from single-pane to double pane glazing for occupants comfort and to save operating costs.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Outside step-downs at entry stoops and curbs should be replaced with ramps for the handicapped.
- Replace any remaining and discolored original ceiling grid.
- Replace damaged VCT flooring.
- Repair damaged drywall. Provide drywall control joints to help control movement.
- Enlarge restrooms as required and meet ADA configurations.
- Provide dual-height drinking fountains to meet ADA requirements.
- Install automatic opening devices at doors without ADA-compliant jamb clearances to walls.
- Consider installation of fire sprinkler system to protect the building and contents.
- Delete the raised access floor in the Court Reporting room and provide electrical drops from overhead (through walls where possible).
- Replace 8 roof top units.
- Incorporate 12 roof top units into digital control system.
- Repair or replace the degrading duct board system.
- Repair the outside air ventilation systems for each of the 12 roof top units so they are functioning properly according to the original design.
- Replace electric water heater.
- Upgrade exterior lighting.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey the building to get a detailed account of the actual performance of fans and coils.
- Perform testing of emergency lighting (egress lighting and exit signs) in the building and replace and/or add devices as needed.

M BUILDING

FCI INDEX: **23.0%**

COST SUMMARY

CRV	Total Cost of Projects
$1,006,250	$242,200

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Consider installation of fire sprinkler system to protect the building and contents.
- Paint exterior metal panels (due to fading).
- Repair or replace broken meter box in yard.
- Repair or replace existing wood swing doors that have deteriorated. Upgrade hardware for doors with knob operation.
- Replace overhead rolling doors with insulated type for cold weather protection.
- Provide knee space at kitchen sink cabinet.
- Relocate lavatory in two restrooms to provide 5 ft. clear wall space at toilets.
- Provide toilet fixtures that will allow mounting grab bars at proper height.
- Replace two DX split system AC units.
- Repair the outside air ventilation ducts/system to function properly according to original design.
- Extend the restroom exhaust fan ducts so they terminate at the exterior wall.
- Replace 2 wall-mounted exhaust fans in storage areas.
- Install trap primers or evaporation prevention devices on 4 floor drains.
- Provide disconnect for transformer.
- Upgrade electrical equipment.
- Provide emergency egress lighting.
- Perform infrared survey of electrical gear.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

N BUILDING

FCI INDEX: **15.8%**

COST SUMMARY

CRV	Total Cost of Projects
$9,377,761	$738,208

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Provide ballistics-rated doors and glazing at shooting range.
- Entry ramp is needed at high step-up to bullet-trap area exterior door.
- Consider installation of fire sprinkler system to protect the building.
- 70 ton chiller will need replacement in about 5 years.
- Replace 3 chilled and hot water pumps.
- Repair chilled water piping insulation.
- Repair 2 outside air ventilation ducts/system so it is functioning properly per the original design.
- Refurbish the filtration system serving the gun range.
- Replace air handling units.
- Upgrade generator transfer switch to be automatic to comply with current codes.
- Air distribution units (VAVs) need to be replaced.
- Replace pneumatic HVAC controls with DDC controls.
- Install automatic controls on exhaust fans.
- Replace existing HVAC duct.
- Replace boiler and review combustion openings.
- Provide sump pump for underground duct providing ventilation for range.
- Improve gun range lighting.
- Replace non-functioning stand-by generator.
- Perform infrared survey of electrical gear.
- Perform an air/water balance survey of each building to get a detailed account of the actual performance of fans and coils.
- Perform testing of emergency lighting (egress lighting and exit signs) in each building and replace and/or add devices as needed.

R BUILDING

FCI INDEX: **5.2%**

COST SUMMARY

CRV	Total Cost of Projects
$3,810,813	$255,160

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Remove floor hold-opens from any rated doors.
- Provide open knee space at kitchenette sink cabinet.
- Reconfigure kitchen restroom for ADA compliance, and upgrade finishes.
- Upgrade Lobby restroom finishes.
- Provide detailed inspection of roof flashing at masonry walls to ensure that there is no hidden damage to wall cavities.
- Consider installation of fire sprinkler system to protect the building and occupants in large meeting room.
- Repair minor area of cracked brick at corner brick ledge.
- Reseal exterior doors that are not under cover.
- Provide exit ramp at rear Lobby exit.
- Provide safety railing at service ramp.
- Provide paint hatching on drive to define access way from HC paving to curb cut.
- Install pond liner and heavy duty filtration system at fountain.
- Upgrade asphalt walking path around pond.
- Replace 3 air handling units serving the large meeting room.
- Upgrade all HVAC controls to DDC.
- Perform detailed air balancing.
- Retrofit original lighting fixtures to T-8 lamps with electronic ballasts.
- Replace stair lighting on exterior.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

S BUILDING

FCI INDEX: **0.4%**

COST SUMMARY

CRV	Total Cost of Projects
$38,447,111	$190,821

PROJECTS SUMMARY

- Repair non-functioning access-control system.
- Set up regular maintenance inspections of gutters and downspouts to ensure they are kept clear of debris.
- In single-user restrooms relocate lavatory outside of the required 5-ft. clear width for the toilet.
- Correct acid drain piping on second floor that discharges to open hub drain and overflows onto first floor ceiling.
- Replace blower wheels for OAHU #1 and #3.
- Replace infrared-activated faucets.
- Program the exercise schedule for stand by generator. Exercise with load.
- Repair the outside air ventilation ducts/system to function properly according per original design.

T BUILDING

FCI INDEX: **3.7%**

COST SUMMARY

CRV	Total Cost of Projects
$4,421,020	$256,074

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Consider installation of fire sprinkler system to protect the building and contents.
- Replace existing residential-grade wood swing doors. Upgrade all hardware and provide lever-operation in lieu of knobs.
- Replace existing residential-grade wood swing doors. Upgrade all hardware and provide lever-operation in lieu of knobs.
- Replace existing painted hollow metal doors and frames. Upgrade all hardware and provide lever-operation in lieu of knobs.
- Consider replacing overhead rolling doors with insulated type for better cold weather protection.
- Provide knee space at break room sink cabinet.
- Renovate restrooms to be ADA-compliant and upgrade finishes.
- Provide toilet fixtures that will allow mounting grab bars at proper height.
- Repair the outside air ventilation ducts/system so it is functioning per the original design.
- Extend the restroom exhaust fan ducts so they terminate at the exterior wall.
- Provide pump on sanitary sewer and connect to city sewer main. Radio station transmitter building.
- At radio station transmitter building provide an air conditioning system designed for continuous use.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

GREENHOUSE

FCI INDEX: **19.1%**

COST SUMMARY

PROJECTS SUMMARY

- Replace wall mounted fans and housings.
- Upgrade controls.
- Replace evaporative cooling coil at east wall.

Costs reported under S Building.

OBSERVATORY

FCI INDEX: **5.8%**

COST SUMMARY

PROJECTS SUMMARY

- Add air conditioning to storage building.
- Add air conditioning to observatory.

Costs reported under S Building.

DISCOVERY

FACILITIES ASSESSMENT SUMMARIES

BASEBALL FIELD + FIELDHOUSE

FCI INDEX: **4.9%**

COST SUMMARY

CRV	Total Cost of Projects
$6,758,500	$436,648

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Consider installation of fire sprinkler system to protect the building and contents.
- Replace all rusting doors and frames. Upgrade all hardware. Provide lever-operation in lieu of knobs at Concession Building.
- Provide knee space at Concession sink cabinet.
- Provide wheelchair seating spaces at ground level of main bleachers.
- Adjust restrooms to be ADA-compliant. Also upgrade finishes at Field House restrooms.
- Connect visitor side drinking fountain to sanitary sewer.
- Replace two air conditioning units in concession/press box building.
- Provide exhaust fans in two restrooms.
- Replace central air conditioning system.
- Provide backflow protection for water supply serving concession stand.
- Replace water heater.
- Replace drinking fountain in front of concession stand.
- Provide egress lighting in Concession and Press Box.
- Consider field lighting to enable night games.
- Upgrade and make functional the underground irrigation system for the playing field.
- Repair the outside air ventilation ducts/system so it is functioning properly according per the original design.

SOFTBALL FIELD

FCI INDEX: **5.0%**

COST SUMMARY

CRV	Total Cost of Projects
$2,010,400	$127,385

PROJECTS SUMMARY

- Upgrading from single-pane to double pane glazing.
- Consideration should be given to upgrading all exterior door locking devices to key-card access for increased security and convenience.
- Clean and recoat concrete floors at Concession and Restrooms (or replace coating with VCT at Concessions and with ceramic tile).
- Replace fixed windows at Press Box with horizontal sliding windows for better viewing.
- Replace worn indoor/outdoor carpet at dug-outs with synthetic turf or other durable material.
- Consider installation of fire sprinkler system to protect the building and contents.
- Consider creating a minimum 4ft. wide electrical closet by sectioning off the electrical panel from the dug-out storage room and providing a separate entrance.
- Consider installation of straight exterior steel stairs in lieu of spiral stair.
- Provide wall-mounted room identification plaques with Braille that are ADA-compliant.
- Refurbish or replace rusting hollow metal frame at dug-out storage door.
- Provide wheelchair seating spaces at ground level of main bleachers.
- Drinking fountains should be dual-height for ADA-compliance.
- Connect drinking fountains in dug-outs to sanitary sewer.
- Provide pump on sanitary sewer and connect to city sewer main.
- Upgrade and make functional the underground irrigation system for the playing field.

ACC Alvin Campus, aerial view, 1995

DISCOVERY
FACILITIES ASSESSMENT

CAMPUS SITE + GROUNDS

Overall, the landscape of the Alvin Community College campus is pleasant, well-maintained and functions adequately. However, there is much more that can be done to improve the function and appearance of the campus, to enhance the image of the college and better the student experience.

Gateways

The formal entrance to Alvin Community College is from Highway 35 at Childress Drive. At this entrance there is a concrete monument sign wall, as well as a modest masonry sign structure with a digital marquee panel. However, in context with the scale, traffic, and commercial nature of the Highway 35 corridor, the presence of the college is underwhelming. The signs at this intersection lack a strong, clear sense of campus identity, which can be confusing to new arrivals to campus.

Once past the intersection the entry drive has some of the better landscaping on campus. The drive through the formal Live Oak grove, at the outer edge of the parking area, is a gateway experience that should be emphasized by reconfiguring Childress Drive to continuously flow without a stop.

Campus Edge

Mustang Road has the longest area of publicly viewed frontage and provides convenient access from town to most of the campus. As much, if not more, traffic enters campus from Mustang Road than Childress Drive. This edge of campus, however, lacks a strong, visually defined boundary and a strong campus identity. Introducing trees and shrubs to screen the parking lot, as well as adding campus identity elements, would increase the prominence and appeal of the campus.

Parking Lots

The vast majority of parking lots on campus are situated on the perimeter of the central core, making them conveniently located for direct access to classrooms, but these lots are not pedestrian friendly. They are expansive areas with hard surfaces, devoid of vegetation. Apart from a sidewalk there is little to buffer the pedestrian zones around the buildings from the vehicle zones. Providing trees and shrubs would break up the expansiveness of the space, delineate drives, slow traffic to make for a safer pedestrian environment, and make spaces more inviting by providing shade and foliage.

Walkways

The original classroom buildings (A, B, C, and D) are oriented toward the central quad, with covered exterior walkways at the lower and upper levels. These protected arcades provide students with a convenient, continuous cover. In the middle of the campus pedestrian circulation is guided along a hodgepodge array of walks; radial walks extend from the round Student Center in the middle of the campus and orthogonal walks generally follow a north-south direction from the ends from the ends of the arcades. Filling the gaps in between are a number of zigzag walks. Other walks have been added with each new project. The resulting overall geometry of all the walks runs counter to natureal, fluid natural pedestrian movements.

The covered walkway on the southern portion of campus distinguishes pedestrian circulation and directly serves N and S Buildings. The primary walk surface material is exposed pea gravel aggregate that has a distinctive appearance, but has proved difficult to maintain and repair over the years. There are many areas that have been patched with a very dissimilar color and texture finish. The newer walks are standard concrete with and provide a good, uniform appearance.

Gathering Spaces

Gathering spaces are disproportionately clustered in the middle of campus, near E Building. In spite of the abundance of pleasant areas to sit under mature trees, from observation, most students sit in areas close to building entries and/or under the protected cover of the buildings.

Most of the seating provided on campus is in the form of fixed benches (see photo at left, adjacent to E Building)that serves individuals more than groups of people. Adding tables and moveable seating to the mix greatly increases flexibility and student interaction.

The breezeways and outdoor spaces adjacent to them are underutilized as student gathering areas. These areas have a relatively high amount of pedestrian traffic and extensive overhead cover; providing lighting and an array of seating options could potentially activate these spaces. These would also be ideal locations for video screens and WiFi hotspots for social media.

Planting + Irrigation

Generally, the campus is pleasant, green, and well-kept, but could benefit from more ornamental plantings that would enhance the brand of Alvin Community College. The existing character is dominated by extensive lawns with mature Live Oak trees and a limited amount of shrub and groundcover planting. The result is a uniform expression of evergreen throughout the year. Few areas have trees that have been planted in a deliberate and purposeful manner that would reinforce entrances, spaces, nodes, etc. Although there are an ample number of trees distributed around the campus, there is a lack of trees along walkways and in parking lots.

The campus entry along Childress Drive has two distinctly landscape schemes: the informal masses of trees, large shrubs, and seasonal flowers set back from the edge of the entry road, and the more the formal lines of Live Oak trees along the edge of the roads near the main building entrance. The formal rows are impressive and could be extended to create a more collegiate experience.

Landscaping around the new S Building has introduced new varieties of plants that provide seasonal interest and diversity. More of this approach would be a welcome addition in other parts of campus. Very few of those plants are evergreen, which is a stark contrast to the rest of campus. Breaking away from the evergreen Live Oak monoculture of trees and adding shrubs with color, texture, and seasonal interest will create a much needed visual diversity.

Figure 1: Reconfiguration of entrance at Childress Drive, to streamline intersection and clarify circulation paths.

Figure 2: Changes to Mustang Road entrance to clarify circulation paths.

TRAFFIC + CIRCULATION

Access

Alvin Community College (ACC) is a suburban campus with vehicular access from SR 35 and Mustang Road. ACC has a signalized access point on Childress Drive at SR 35. ACC has eight additional unsignalized connections to Mustang Road, plus an unsignalized connection for Building K on the east side of Mustang Road. Based on site observations and crash data review, all access points were observed to operate adequately. At times the signalized Childress Drive/SR 35 intersection queue backs up past the Nolan Ryan Center driveway, but typically dissipates quickly and vehicles do not have to wait through more than two cycles.

Vehicular Circulation

College Circle provides a ring road around the campus. ACC's Police Chief indicated that there was a speeding problem on College Circle along the western and southern portions of the road near the ball fields.

The main internal point of congestion on campus is where Childress Drive turns and intersects with College Circle. The the 5-way intersection (see photos at left) is not intuitive for drivers to navigate and creates undue delay, especially for those drivers who are unfamiliar with the campus. Currently, there are barricades where Childress Drive ends, which are not visually appealing, especially as a first impression entering campus.

Parking

ACC currently has 2,293 regular parking spaces and 45 handicap parking spaces for a total of 2,338 parking spaces on campus. The City of Alvin Code of Ordinances requires that a high school, college, or university provide one space for each classroom, laboratory or instruction area, plus one space for every three students accommodated at the institution. ACC currently has 72 laboratories, 103 classrooms/instructional areas, and a total enrollment of 5,116 students. Based upon those numbers, the City of Alvin Code of Ordinances requires that 2,087 total parking spaces be provided, 251 less than ACC currently provides.

ACC is currently short 30 handicap spaces over 10 different parking lots. ACC needs to restripe parking lots so that the minimum required handicap spaces are provided in each parking lot. Additionally, some of the existing handicap spaces do not meet ADA requirements for an access aisle adjacent to the handicap space.

Pedestrian Circulation

Sidewalks around the perimeter of the buildings connect to the interior of the campus. There is also a paved walking trail that starts at the Nolan Ryan Center on the north part of campus and goes around the ball fields on the west side of campus, all the way down and around the southern part of campus outside. Connectivity between the campus sidewalk around the perimeter of the main buildings

and the walking path do not exist, nor does connectivity to SR 35 or Mustang Road.

At the Childress Drive/SR 35 intersection, there are curb ramps, marked crosswalks, and pedestrian signals to allow pedestrians to cross SR 35 to get onto the ACC campus. However, once on the south side of SR 35, there is no sidewalk beyond the curb ramp constructed at the intersection.

Mustang Road has sidewalks on both the east and west side of the road. Two mid-block crossing locations are provided with push button activated flashing amber beacons to alert motorists to pedestrians in the crosswalk. Once pedestrians cross at the mid-block crossing locations, a marked pedestrian path to the main portion of campus does not exist. ACC should consider creating dedicated pedestrian routes to allow pedestrians to get from Mustang Road through the parking lots to the main campus buildings.

To provide better pedestrian connectivity between the northern and southern sections of campus, ACC could remove Ditch Road and the associated parking to create additional green space and eliminate vehicular/pedestrian conflicts. This would create better pedestrian continuity between the two sections of campus.

Signage + Wayfinding

Regulatory signs throughout the campus do not meet the proper height requirements, 7 feet, listed in the Manual on Uniform Traffic Control Devices (MUTCD). The majority of regulatory signs on campus do not meet this standard, and in many instances are less than four feet above the edge of pavement. This provides advanced visibility issues with the signs due to the difficulty to see them beyond a parked vehicle or when traveling behind another vehicle. Additionally, three locations on campus where internal roadways intersect are missing stop signs and stop bars.

ACC has eight way-finding signs throughout campus (see photo at left). The way-finding signs provide adequate information to navigate to a specific building on campus. One item that should be displayed more explicitly on signs is information for visitors, specifically where visitors should park and check-in. Parking Lot A is currently designated for visitors, but signs direct visitors to both Parking Lot A and Parking Lot B, and that information is not on all signs. It is recommended that visitor parking and check-in information be provided on all signs and that signs clearly direct people to Parking Lot A.

CIVIL + SITE INFRASTRUCTURE

Water

The City of Alvin provides public water to the ACC campus via an 8" line along Mustang Road on the east side of the property. According to the City, this is an Asbestos Cement (AC) line, which is a material that ceased to be used in the early 1970s due to health concerns. The purpose of the public water supply is for drinking water, kitchen and bathroom use, and fire protection.

The majority of on-site fire hydrants have not been maintained, painted, or audited. Some are partially buried in concrete and may be inoperable or unserviceable. Several hydrants will need to be serviced, raised to proper height, and painted. Some may need complete replacement due to poor seals, gaskets, and rust.

Wastewater

The City of Alvin receives wastewater from the ACC campus via 10" and 12" gravity lines along Mustang Road. Sanitary sewer waste from kitchens and restrooms is evacuated offsite through these mains and is treated downstream.

The softball concession stands and at least one other building appear to still be implementing a septic system. These buildings should be connected to the onsite sanitary sewer in order to minimize maintenance and operating costs.

Drainage

The City of Alvin and the Brazoria County Conservation and Reclamation District #3 have drainage requirements for new developments and substantial improvements to existing developments. The majority of these regulations are based on guidance and mandates from the National Flood Insurance Program (NFIP) and the Federal Emergency Management Agency (FEMA). ACC is located primarily within the lower risk floodzone. Flood insurance is not required for properties in this zone, but it is recommended everywhere in Brazoria County.

While portions of ACC were constructed prior to the current drainage regulations and requirements for stormwater detention, the campus does have a detention pond along the southern property boundary. This pond contains a concrete pilot channel. Upon inspection, it appears that this pilot channel is holding water instead of aiding the offsite evacuation of said water. A topographic survey should be completed for this pilot channel in order to determine the current slope and grade. It is possible that portions of the pilot channel have subsided and could be elevated to promote proper flow. However, it may also be determined that the pilot channel needs to be removed and replaced with a new pilot channel. This decision can be made after the survey has been completed.

In addition to the detention pond, another significant drainage facility exists onsite in the form of a drainage channel. This channel bisects the property from east to west between the baseball and softball fields and drains a significant portion of the campus.

Figure 1: The detention pond and pilot channel

Figure 2: Drainage channel

The road crossing culverts, headwalls, and outfalls, are showing significant signs of degradation and should be remedied in the near future. A boundary and topographic survey would confirm the ownership of this channel (ACC, City, or CR3), and aid in the process of repair.

There are numerous potholes and low spots in the ACC parking lots that hold water over 24 hours after a rain. These areas should be filled, repaired, and/or regraded to drain properly in order to minimize tripping hazards, stagnant water, mosquitos, etc.

Many of the storm sewer inlets are undersized and in disrepair. Broken concrete and visible debris is prohibiting proper runoff and increasing the potential for on-site flooding. A complete TV inspection of all existing storm sewer inlets, manholes, and pipes should be performed to catalog and prioritize necessary repairs.

Pavement

For the purposes of this Site Civil Report, the term pavement refers to streets, roads, parking lots, and perimeter sidewalks. Other paved areas (such as courtyards, walkways, and common areas) are discussed elsewhere.

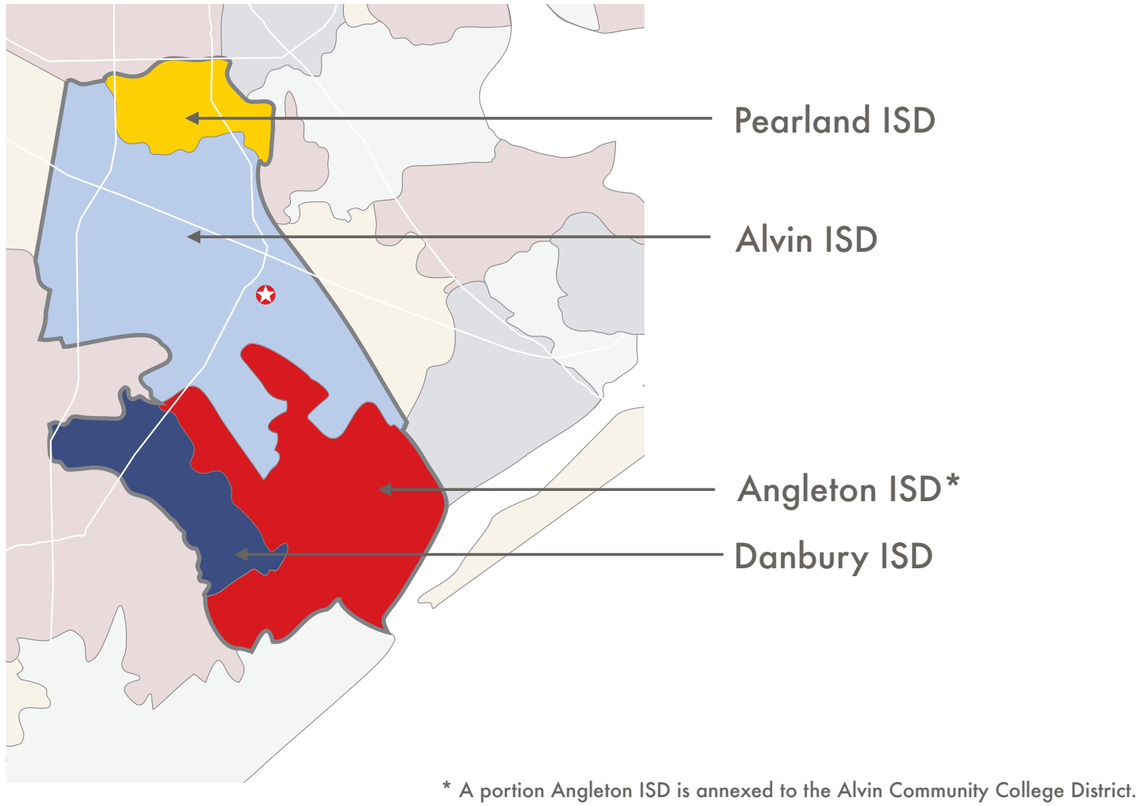
Finally, the majority of the parking areas are in need of repair. Standing water, poor drainage, and potholes increase the possibility for damage to property, vehicles, students, and employees. In order to determine the optimum repair method (i.e. Reclaiming the existing asphalt vs adding a thin seal coat) for the different affected areas, geotechnical borings should be collected in key locations.

DISCOVERY

DEMOGRAPHICS

EXISTING DEMOGRAPHICS

To better understand how demographics are likely to impact the future requirements of Alvin Community College and provide a basis for strategic decisions, analysis was prepared of current and projected future high school enrollment and the underlying population changes. These observations are primarily based on enrollment data provided by ACC as well as demographic studies prepared by Pearland ISD (Fall 2013) and Alvin ISD (Fall 2015).



* A portion Angleton ISD is annexed to the Alvin Community College District.

Figure 1: ACC Service Area Map

Alvin Community College District

The Alvin Community College service area (Figure 1) includes the Alvin, Pearland, Danbury Independent School Districts as well as a portion of the Angleton District. The rapidly growing Pearland and the SH 288 corridor areas roughly provide the northern and western boundaries. The service area then extends south southeast to the Gulf of Mexico becoming generally more rural.

High School of Origin

Five high schools, Alvin, Manvel, Robert Turner, Pearland, and Glenda Dawson, act as the "feeder" schools for virtually all of the ACC headcount as indicated by designated High School of Origin from Fall 2015 headcount (Figure 2). Alvin and Manvel High Schools are the source of approximately half of all ACC students.

Graduating high school seniors are the primary source of future students for the community college, especially for academic transfer students. Understanding the impact of this pipeline of students involves understanding the quantity of seniors from each high school, how successful ACC is in enrolling these students, and future changes to high school enrollment.

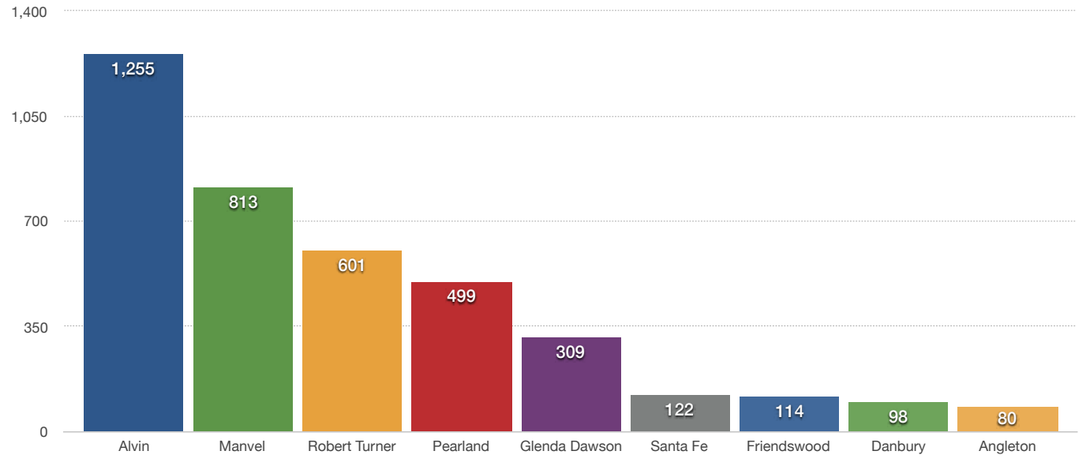


Figure 2: ACC Headcount by High School of Origin

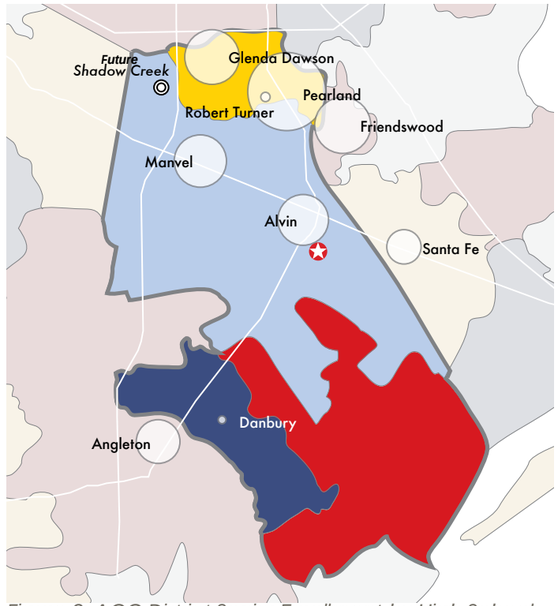


Figure 3: ACC District Senior Enrollment by High School

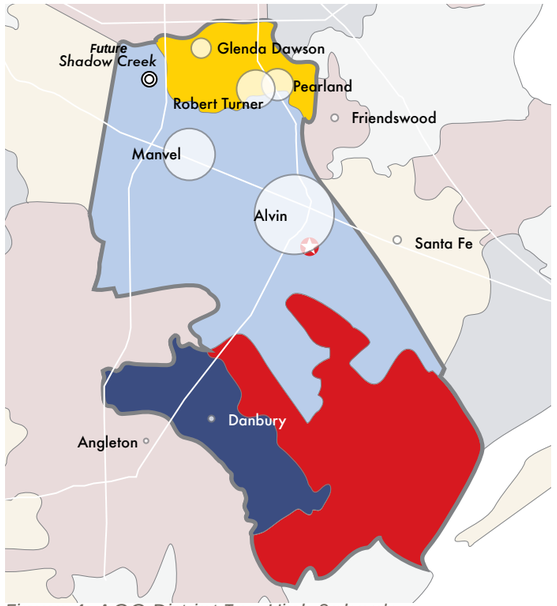


Figure 4: ACC District Top High Schools

District Senior Enrollment

Based on the most recent data available from the Texas Education Agency (TEA) database, the 2013-2014 school year, ACC District Senior Enrollment provides a proportional representation of the relative scale of District high schools senior class size (Figure 3). Schools in the northern third of the district, especially the Pearland area, provide the largest potential source of future ACC students as measured by the scale of potential graduating high school seniors.

ACC District Top High Schools

ACC District Top High Schools provides a proportional representation of the indicated high school of origin for Fall 2015 ACC students (Figure 4). As illustrated, Alvin and Manvel high schools, along with Robert Turner from the Pearland ISD, are the high school of origin for the majority of ACC students.

ACC Capture Rate

Capture rate analysis compares the senior enrollment for the 2013-2014 school year with the Fall 2015 ACC headcount providing an illustration of the relative success the college enjoys recruiting students from the Pearland versus Alvin school districts (Figure 5). With the exception of Robert Turner, where ACC has an active partnership, ACC is significantly more successful recruiting students from Alvin and Manvel High Schools, both within the Alvin ISD.

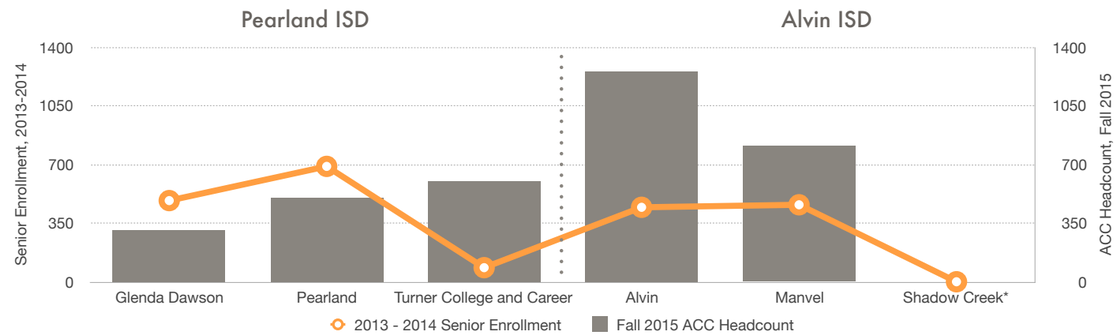


Figure 5: ACC Capture Rate

DISCOVERY

DEMOGRAPHICS

PROJECTED DEMOGRAPHICS

Demographers use home sales and subsequent household creation to project future ISD enrollment. The traditional methodology is driven by four contributory factors: housing starts; closings (or sales); vacant developed lots (available lots within subdivisions); and future lots (usually subdivisions that have been platted but do not yet have infrastructure). Starts and Closings measure the current year supply and absorption. Vacant Developed Lots and Future Lots allow a look into the future. While ultimate sales are primarily influenced by the health of the economy, the two measures offer the current lots available to homebuilders and the proposed future supply of lots as indicated by developers.

Alvin ISD is currently one of the more active districts for starts and closings in the Greater Houston area. Alvin also enjoys significant potential for growth. Conversely, Pearland ISD is much more fully developed. All indicators suggest Pearland's growth of household creation will be very limited. The analysis presented therefore focuses specifically on the Alvin ISD area.

Annual Closings (Figure 1) are dominated by subdivisions along the SH 288 corridor generally immediately west of Pearland. Immediately west of SH 288 sequentially from south to north, Sterling Lakes (165), Savannah (132), Southlake (125), and Southern Trails (105) are most active subdivisions in the Alvin ISD area.

Vacant Developed (Figure 2) and Future Lots (Figure 3) suggest rapid potential growth in the far northwest portion of the Alvin ISD area again along the SH 288 corridor. The largest number of available lots are in Pamona (298), Southlake (230), Rodeo Palms (166) and Sterling Lakes (137). Looking further into the future proposed development moves further south along the highway corridor. Sterling Lakes (2,213) is the largest concentration of future lots within an active subdivision. While Meridiana (5,500) potentially offers by far the largest future number of houses, the development of this subdivision seems more likely to be influenced by economic conditions.

As suggested by the contributory factors of home building and household creation, the Pearland ISD high schools are projected to experience limited growth in the ten-year projection period from 2014 to 2024.

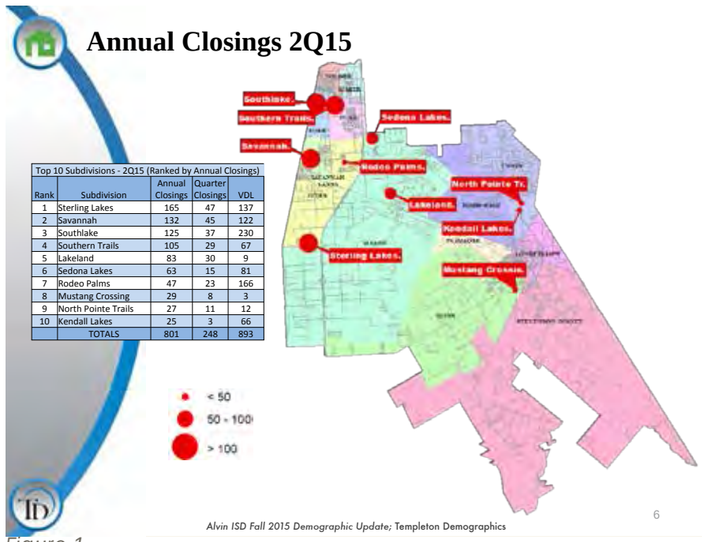


Figure 1

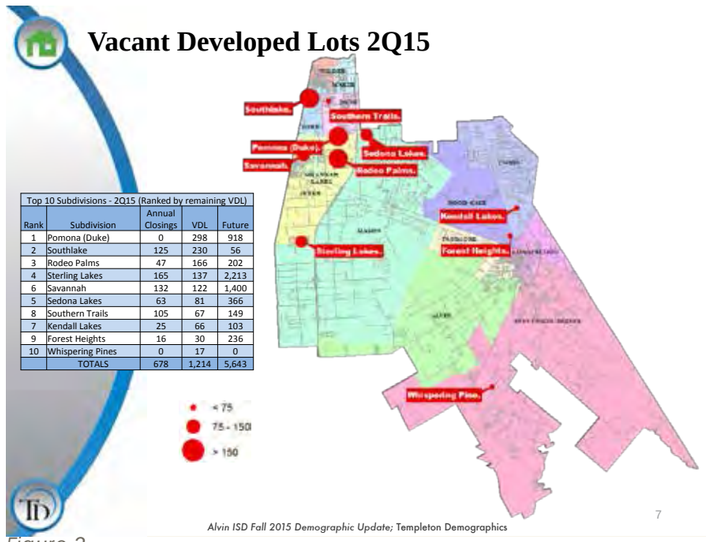


Figure 2

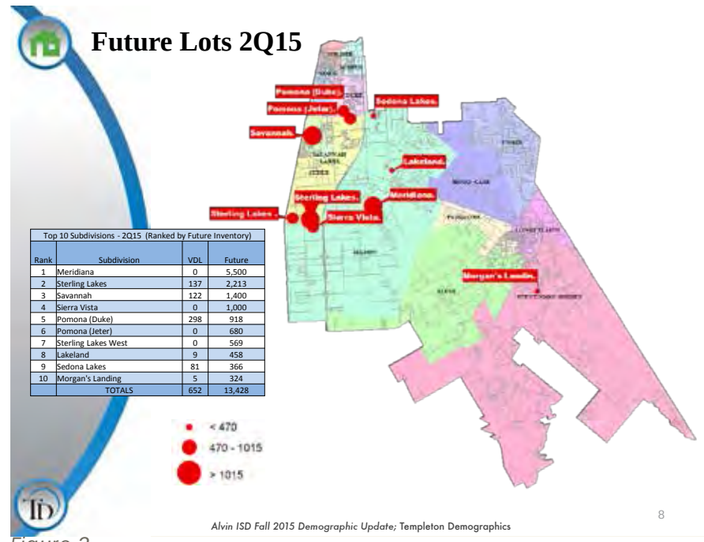


Figure 3

Alvin ISD is projected to have much faster growth in high school enrollment and is responding to the scale and location of the proposed growth with a new high school, Shadow Creek, in the far northwest corner of the district. With the opening of Shadow Creek in the 2016-2017 school year, Manvel High School is projected to significantly decline in enrollment for several years before resuming growth. Alvin High School is projected to be largely unaffected by the construction of Shadow Creek, experiencing steady but measured growth. Shadow Creek is projected to grow extremely rapidly for several years and remain the fastest growing school in either district throughout the projection period.

Summary Observations

For community colleges physical proximity matters. Data from a wide variety of community college districts throughout Texas confirms that convenience primarily to residence and secondarily to workplace correlates to enrollment and capture rates.

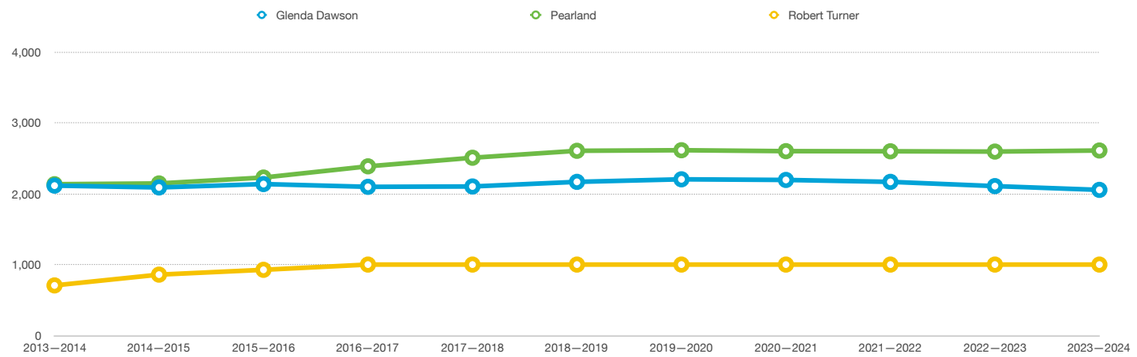


Figure 4: Pearland ISD Enrollment Projections by High School

The current enrollment and capture of Pearland ISD high school graduates is significantly below enrollment and capture of Alvin ISD high school graduates with the exception of Turner College and Career High School which partners with the college.

Every measure of future growth within the Alvin Community College District suggests growth will be concentrated in the northwest corner of the district, adjacent to the SH 288 corridor. The growth is dominated by the area immediately west and south of Pearland, but growth within Pearland ISD growth will be comparatively slow.

The area around the future Shadow Creek High School provides the greatest opportunity for current and future enrollment growth for ACC. Capture rates suggest the area is both currently underserved and the area within the district which will experience the most rapid growth. These new subdivisions also have favorable demographic characteristics for participation in higher education given the concentration of home ownership. Further, the analysis suggests a satellite location in this area will grow enrollment with very limited impact on existing enrollment and locations.

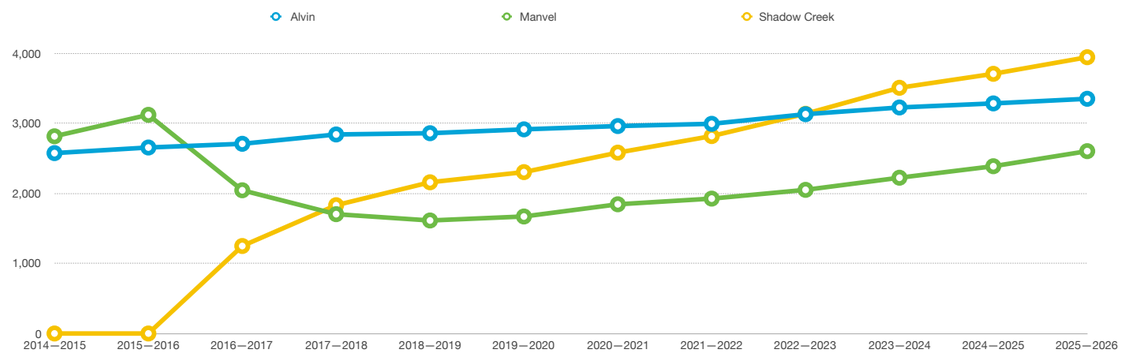


Figure 5: Alvin ISD Enrollment Projections by High School

DISCOVERY

SPACE UTILIZATION ANALYSIS

UTILIZATION DEFINITIONS

Utilization is analyzed in three ways:

Assignable Square Feet per Student Station (ASF/SS)
- looks at how much space is available for each student

Weekly Room Hours (WRH)
- looks at how often the room is used

Student Station Occupancy (SSO)
- looks at how many available seats are filled

National Targets

Classroom/Lecture

ASF/SS	WRH	SSO
21-33	32-36	65%

Laboratory/Studio

ASF/SS	WRH	SSO
52	28-34	70-75%

Striking the perfect balance between curricular needs and space resources is a challenge. Physical space is a built, solid, relatively immovable object whereas coursework can be dynamic, growing, and/or shifting in new directions every year. Therefore, the built environment must be sized to address known needs and growth projections as well as be able to flex to accommodate unknown future changes and opportunities over time. The closer the space can match the needs, the more efficiently space can be used, which keeps the institution from over-building and having excess space to maintain.

Efficient space use is governed by many factors, including physical conditions, scheduling policies, and programmatic needs. This report seeks to uncover the academic and operational limitations on space use and discuss what elements can be modified to better optimize use moving forward without sacrificing academic integrity.

The Utilization Model

Utilization measures the extent of the current practical use of the existing instructional facilities in conformance with goals established by the Texas Higher Education Coordinating Board (THECB). These goals are derived from and consistent with standards established by the Council of Educational Facilities Planners, International (CEFPI).

For classrooms, Target Utilization, by definition, assumes that 65% of the available classroom seats are occupied for 32 hours per week on average. In the Utilization Model, a building or campus at the Target Utilization measures 65%. A measure below 65% Utilization indicates that sections are small relative to the available seats in the classroom, and/or more sections could be scheduled during weekdays.

For classrooms, Theoretical Maximum Utilization, by definition, assumes that 65% of the available classrooms seats are occupied for 40 hours per week on average. In the Utilization Model, a building or campus at Theoretical Maximum Utilization, measures approximately 81%. A measure between 65% and 81% Utilization indicates that sections are practically full or that few classrooms are available for additional sections during weekdays. A measure above 81% Utilization usually indicates that sections are practically full and additional sections would most likely have to be scheduled during weeknights or weekends. In this scenario, with some classes already being scheduled outside normal hours, access is likely being denied to students unable to attend classes during non-standard times. At a minimum, the lack of capacity during peak periods of demand creates barriers to use.

Classrooms vs. Instructional Laboratories

Utilization for instructional laboratories is evaluated separately from classrooms. Their specialized capabilities and usage often prevents them from being used as intensely as classrooms. Evaluating classrooms and laboratories together is likely to present a lower utilization than actually exists. For laboratories, Target Utilization, by definition, assumes that 75% of the available classroom seats are occupied for 25 hours per week on average.

DISCOVERY

SPACE UTILIZATION ANALYSIS

Room Utilization + Section Occupancy

Distinctions can be made by looking at the components of utilization measurement. Room utilization measures only the hours per week that sections are scheduled against the standard of 32 available per week. How full the sections are is ignored. A measure of 100% room utilization indicates that rooms are scheduled for an average of 32 hours per week. Counterintuitively, room utilization can, and often does, exceed 100% for popular heavily used classrooms or laboratories. This simply means the room was scheduled more than an average of 32 hours per week.

Section Occupancy only measures the fullness of scheduled sections that are assigned to rooms. How often the rooms are scheduled is ignored. A measure of 100% Section Occupancy indicates the rooms are full when in use. Section Occupancy above 100% can only be achieved by crowding additional seats into the room. Management of Section Occupancy can be used to indirectly manage the efficiency of operating costs related to faculty.

Summary Observations

Scheduling at Alvin Community College is fragmented with scheduling managed in several locations by type of instruction and no centralized comprehensive scheduling system. Operationally, this is less of an issue because the campus currently generally has significant available instructional capacity making "tight" and efficient space management less critical to day-to-day operations. However, as enrollment grows or capacity is reduced by the removal of instructional spaces or facilities in poor condition, the need for campus-wide integrated scheduling will increase.

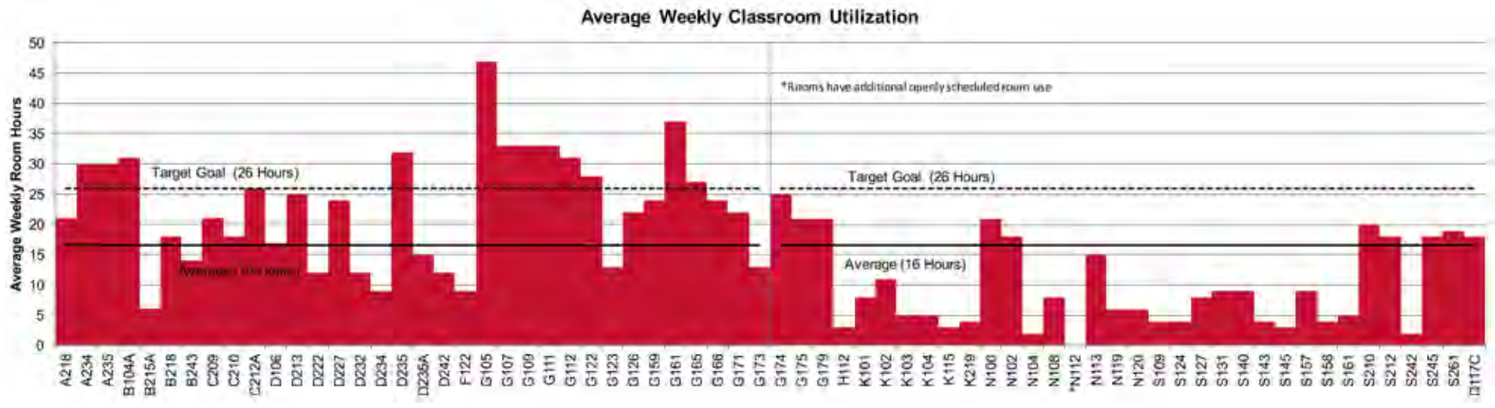
This utilization analysis is specific to credit students. This is the majority of students at the college, but does not include certain categories of students including Continuing Education and Workforce Development. The overall picture of campus utilization is representative and supports the conclusions, but the actual utilization of space is incrementally higher than indicated. To present a more accurate picture, instructional spaces effectively dedicated to the non-credit classes have been removed from the inventory. This allows the model to measure utilization to capacity specifically for classrooms where the vast majority of use is credit students.

Classroom Utilization

Peak period demand for classrooms is between 8:00 AM and 12:00 AM, Monday through Thursday. Virtually no classroom instruction occurs on Friday. During the peak period morning hours, approximately 60% of classrooms are scheduled.

Overall classroom utilization, a combination of scheduling and section fill, is approximately 36% versus the goal of 65%. The average classroom is scheduled 16 hours per week compared to the goal of 32 hours per week (or approximately 26 hours per week if the model is informally modified to represent four-day per week scheduling).

The primary impact of capturing the non-credit students in these classrooms would be an incremental increase in section fill. The data confirms there is substantial available instructional classroom capacity to accommodate non-credit students, enrollment growth in existing programs, or changes to the inventory.



Stantec

DISCOVERY

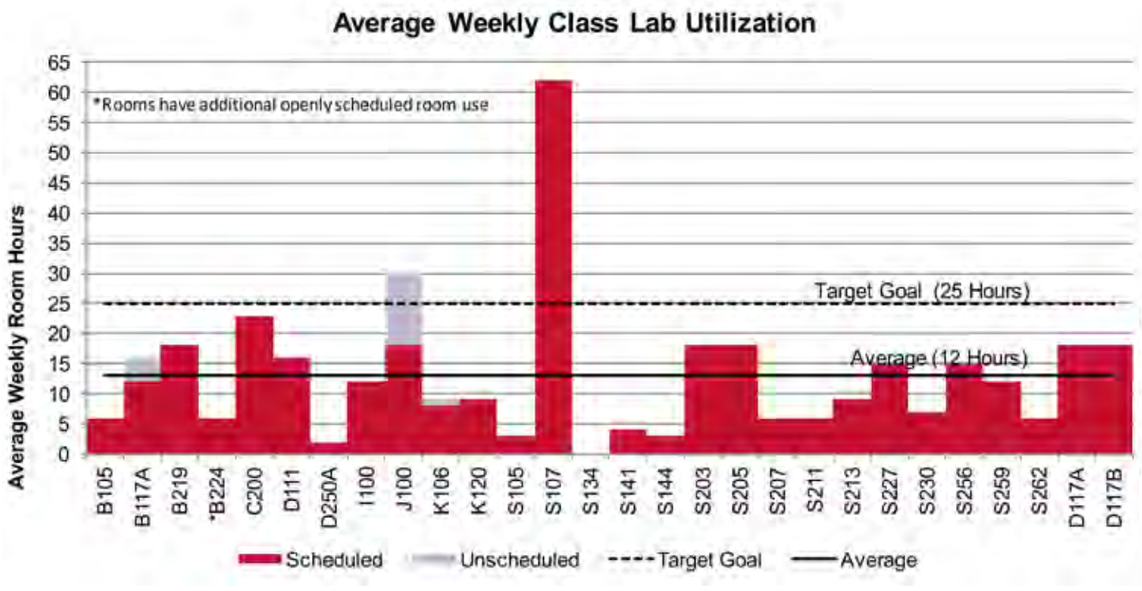
SPACE UTILIZATION ANALYSIS

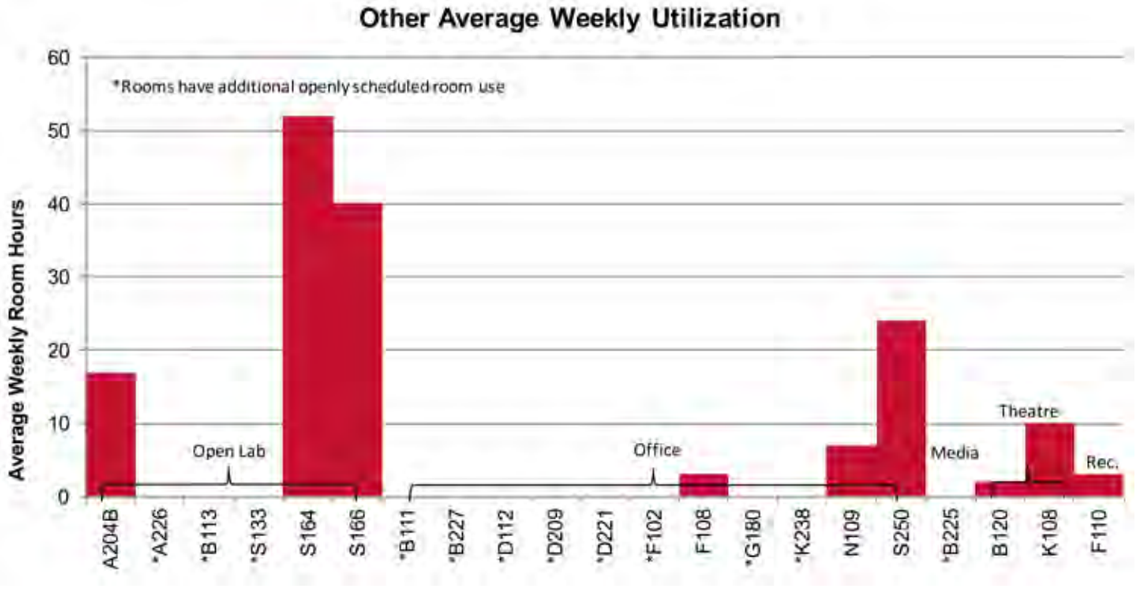
Instructional Laboratory Utilization

Peak period demand for laboratories is in the morning with a significant secondary peak in the early afternoon. Virtually no laboratory instruction occurs on Friday. Peak period demand, Tuesday, 9:00 AM, sees approximately 50% of all labs scheduled. Overall laboratory utilization, a combination of scheduling and section fill, is approximately 21% versus the goal of approximately 59%. The average laboratory is scheduled 12 hours per week compared to the goal of 25 hours per week (or approximately 20 hours per week if you informally modify the model to represent four-day per week scheduling).

Utilization of laboratories is inherently specialized, making overall averages less relevant. A measure of 100% lab utilization indicates that rooms are scheduled for an average of 25 hours per week. Very few specific laboratories appear stressed due to lack of instructional capacity. With three important caveats to the overall conclusion, laboratories in disciplines heavily used by non-credit students demand is under reported, auditorium with large numbers of seats distort the overall conclusions, and peak period demand driven by non-traditional scheduling can create shortfalls in capacity for a given laboratory. However, overall the data confirms there is substantial available laboratory capacity to accommodate non-credit students, enrollment growth, or changes to the inventory, especially given the virtual absence of instruction on Friday.

The utilization analysis suggests the primary issues associated with instructional spaces are the quality and range of programmatic capabilities supported. Simply stated, looking forward the college should focus not only on more general-use instructional spaces, but primarily on updated instructional spaces that are "different and better" to support specific needs.





DISCOVERY

STAKEHOLDER ENGAGEMENT

OVERVIEW

During the Discovery phase of the project, Stantec collaborated closely with Alvin Community College's Executive Leadership Team (ELT) to implement a planning process that was inclusive and comprehensive. The ELT identified various stakeholder groups to ensure a broad perspective. Input was gathered through interviews, visioning sessions, workshops, online surveys, and from the collection and review of existing documentation.

Through this phase of the project, the design team sought to understand the organization of campus land use, campus infrastructure open spaces, and future development potential. Existing academic and administrative spaces were evaluated through both qualitative and quantitative approaches.

STRATEGIC PLAN

Alvin Community College contracted the Collaborative Brain Trust - a strategic planning consulting group - to facilitate the creation of a 2016-2026 Strategic Plan, which included an evaluation of internal and external stakeholders' views of Strengths, Weaknesses, Opportunities, and Threats (SWOT) to the existing ACC campus. The SWOT analysis yielded insightful observations about the campus and ACC's relationship to the community. These sessions provided direction to the design team and helped to focus the direction of additional workshops and interviews.

STAKEHOLDER GROUPS

Stantec held visioning sessions with the ELT and Administration, as well as key groups of stakeholders identified by the ELT: a Community Advisory Committee, faculty, and staff members. Inputs from each group were used to guide the conversation with other groups. Student input was gathered through a Student Life Assessment online survey.

COMMUNITY ADVISORY COMMITTEE

In September 2015, Stantec held a workshop with the Community Advisory Committee, made up of 69 people representing families, business owners, community development professionals, politicians, and other interested parties in the ACC taxing district. The CAC was asked to define how they thought buildings and facilities would play a role in the identity of ACC, and also to describe what they imagine ACC would be like in 2025. Seven themes were identified in their responses:

Look and Feel: The Alvin Community College campus should be well-maintained and feature aesthetically-pleasing buildings that utilize the most current technology, both in the building and in the classroom. The campus should have an eye-catching character from a distance – for those passing on the road – and up close, for those arriving at any entrance. The identity of ACC should be proudly displayed, not only to those within the campus but to those passing by or arriving for the first time.

Accessibility and Safety: The Alvin Community College campus should be welcoming, safe, and easily accessible, by utilizing clear and inviting wayfinding features, improving landscaping, improving lighting, and offering amenities that appeal to students and community members. The campus should be a place that students want to come to and stay at, even when they are not in class, and that the community can come to for exercise, services, and special events. Ease of access for people with varying abilities should be maintained throughout the campus.

Real-World Training: The Alvin Community College campus should provide students with excellent job training and learning spaces, featuring the most current classroom technology. Classrooms and labs should provide students with hands-on learning experiences that closely mirror real-world job settings, to provide younger students with exposure to work environments and to allow adult students to feel at ease in the college. These classrooms and labs should be informed by ACC's partnerships with regional businesses and industry, to ensure that the training provided is relevant and of the highest quality.

Multiple Locations in the Community: The Alvin Community College campus should not be the only ACC destination within the community. A west side campus appeals to many stakeholders; other options include satellite locations, co-branded facilities, increasing site-based counseling at K-12 schools, and providing avenues for students to become more involved in the community.

Adaptable and Collaborative: The Alvin Community College campus should have a sense of dynamic energy and integration across the campus. Buildings should include flexible, adaptable spaces.

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STAKEHOLDER ENGAGEMENT

Classrooms should be flexible for changing teaching styles and multiple purposes within one year or semester. Spaces for collaboration and innovation should be provided. Common areas with a comfortable café feel should offer students space to socialize, study, and "just be." These areas should also support community visitors for services and special events.

Serving a Variety of Students: The Alvin Community College campus, and the online experience of ACC, should be approachable and appealing to the wide variety of students that ACC serves. In addition to traditional college-aged students, the ACC campus will be used by returning students, parents, local workers seeking training, veterans, first-generation college students, and speakers English as a Second Language. The experience provided by the campus, the Student Services and Employment Services centers, the classrooms, and online ACC courses and services should be cohesive and navigable for this diverse student body.

Pride and History: The Alvin Community College campus should provide students and visitors with an experience that reflects ACC's highly-ranked status and displays its rich history. Being on the campus should feel similar to being at a four-year university, to increase pride among students and ease the transition to universities for transfer students. Additionally, ACC should highlight cultural diversity on campus and provide spaces and events for recognizing the variety of cultures in the service region. Whatever changes happen at ACC over the course of the years, there should always be a sense of familiarity about the campus.

STAKEHOLDER GOALS

- **Look + Feel:** A campus that is welcoming, and aesthetically appealing to students and visitors, and attractive to those passing by on roads.
- **Real-World Training:** Facilities and programs to provide job training with up-to-date equipment, in settings that mirror the real workplaces.
- **Multiple Locations in the Community:** A West Side campus, satellite locations, and site-based counseling to improve outreach.
- **Adaptable + Collaborative:** Flexible spaces and classrooms that allow users to adapt to different learning experiences, and to future changes in teaching style.
- **Serving a Variety of Students:** Serving traditional and non-traditional students by providing online and on-campus services that enhance their ability to succeed.
- **Amenities for Students + Community:** A conference center for hosting a variety of events. Improved fitness facilities and food offerings to allow staff and students to make healthy choices.
- **Accessibility + Safety:** A campus and facilities that are accessible to all and safe for use at all hours, with amenities that are available to students and the community.
- **Pride + History:** A campus that displays and celebrates what ACC represents, and which showcases the history of the school.

COMMUNITY ADVISORY COMMITTEE

In addition to the stakeholder groups involved in developign the overall Facilities Master Plan, a Long Range Facility Committee (LRFC) was convened to prioritize projects to recommend for a bond.

The LRFC met six times in December 2015 and January 2016 to review the information contained in the Facilities Master Plan. They then provided input to help decide which projects should move from later phases to earlier ones, and vice versa. They also provided valuable input leading to defining project concepts to be well-suited to ACC's community.

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STAKEHOLDER ENGAGEMENT

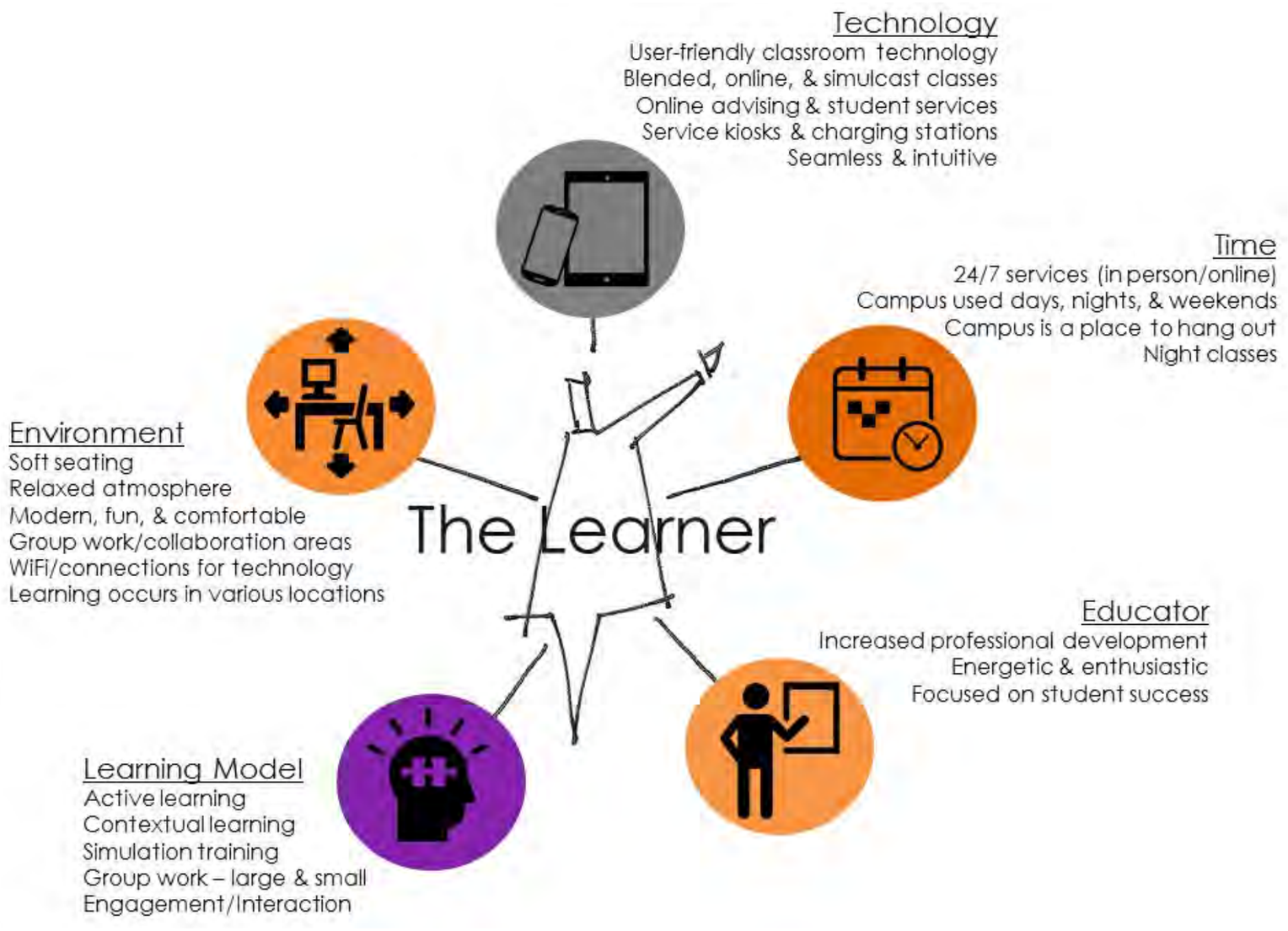
EXECUTIVE LEADERSHIP TEAM

In October 2015, Stantec held a visioning session with the Alvin Community College Executive Leadership Team. The ELT was asked to describe their vision for teaching and learning at ACC, as well as what they would expect to see if they arrived at the campus in 2026. They were also asked about the most minimal change they could imagine having the biggest impact, and the way they envisioned technology and tools being incorporated into the ACC environment.

The ELT emphasized their goals for the future revolve around students at the center. Because of this strong focus on the learner, the planning team organized the ELT's responses using the Elements of Learning model, which also places the Learner at the center of the system.

The smallest changes the ELT discussed included replacing outdated furnishings and equipment that were highly visible, such as bulletin boards in hallways and furniture in public areas, as well as creating or updating one facility that could serve as a central focus to the campus. They also discussed improving the entrance to the campus, to provide a more welcoming arrival for students and visitors.

The ELT was very clear in its vision for utilizing new tools and technology at ACC. Beyond WiFi improvements and charging stations, the ELT was extremely interested in adopting radio-frequency identification (RFID) for staff and students, and in using more simulation training in classrooms.



DISCOVERY

STAKEHOLDER ENGAGEMENT

FACULTY AND STAFF

Two workshops were held to discuss the vision for learning at ACC with faculty and staff members. The workshops had 41 total participants from a variety of ACC's departments and programs, including:

- Administration
- Allied Health
- Arts and Design
- Biology
- Chemistry
- Continuing Education
- Criminal Justice
- Dual Credit
- Drama
- English
- Geology
- Industrial Design
- Information Technology
- Math
- Music
- Nursing
- Office Administration
- Paralegal
- Physical Education
- Physics
- Pipefitting
- Process Technology
- Psychology
- Sociology
- Student Services
- Welding

Exercises were done during these workshops, to understand what they hoped their students would get out of the ACC experience, how they defined success for the ACC Master Plan, and what obstacles might stand in the way of teachers adopting new technologies.

When asked about their vision of success for the ACC Master Plan, faculty and staff echoed many of the sentiments expressed by the CAC and ELT. They envisioned ACC as an appealing, welcoming campus with modern-looking facilities and cutting-edge teaching tools. They expressed a strong interest in teaching environments that allowed students to develop workforce skills and learn to act in a professional manner. Some expressed a concern that students were coming to ACC from recently updated high schools, and leaving ACC for modern workplaces, neither of which resembled the ACC campus itself.

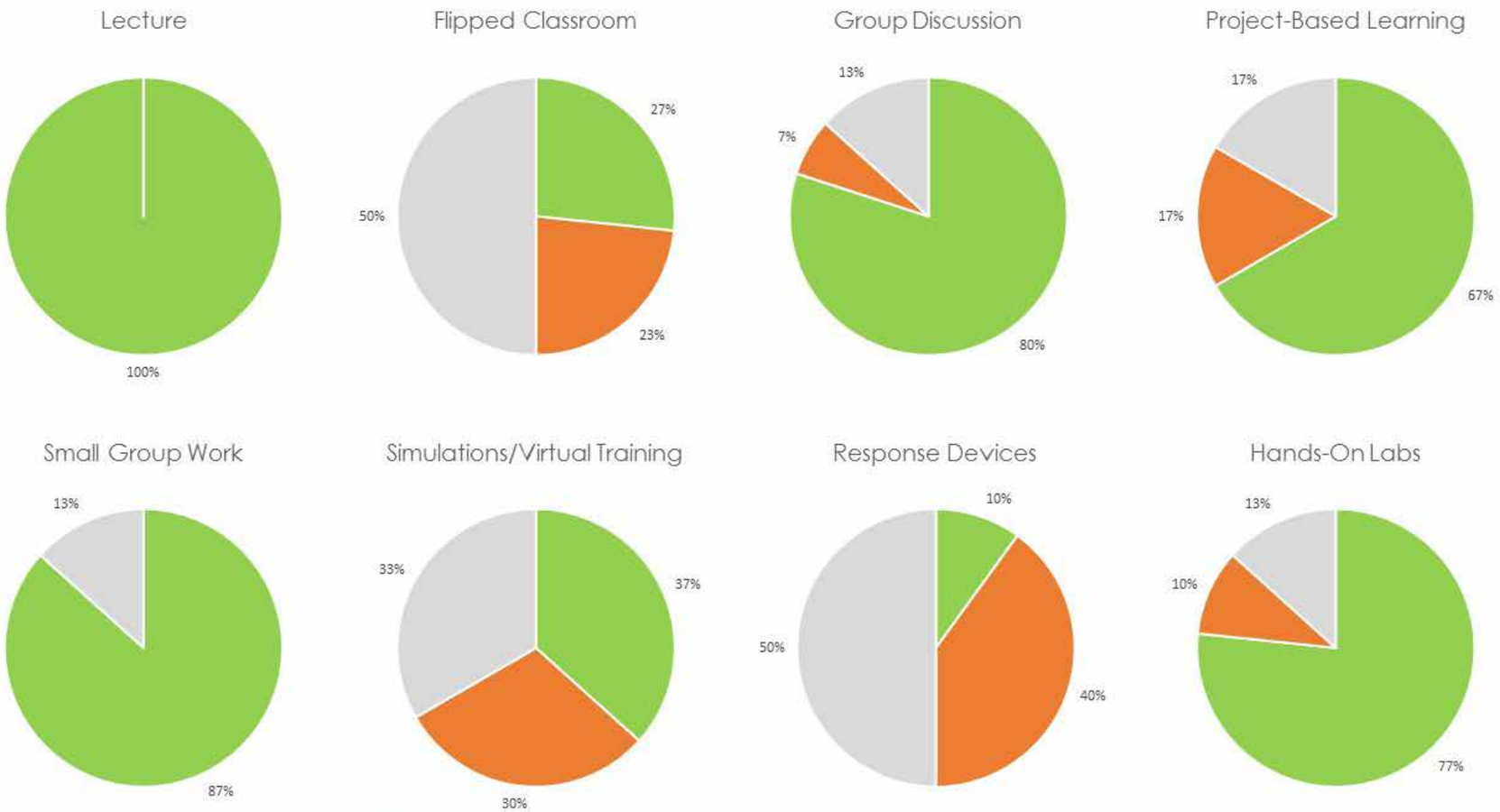
ACC teachers expressed an interest in using, or increasing their use of, different teaching methods, including flipped classroom, project-based learning, simulation training, and more collaborative activities. There were two major barriers identified that prevented them from adopting new teaching tools: one was access to and training for a new tool or technology, and the other was inflexible classrooms that were difficult to rearrange for varying activities. Many teachers were simply working around the difficulties to accomodate the teaching styles they wanted to use, but found that it took up their own personal time or class time to prepare for different scenarios.

What emerged was an emphasis on students who were prepared to become successful transfers or employees, who had an internally-motivated excitement for learning, and who came away with the skills they needed for life and work. The individual words faculty and staff used to describe student outcomes, completing the sentence "After their time at ACC, my students will become _____," were used to create the word cloud shown at right.

DISCOVERY

STAKEHOLDER ENGAGEMENT

As teaching methods change and evolve, classrooms need to be able to support different and new activities. The faculty and staff of ACC were asked about teaching tools and methods they do use, or want to use but can't. This exercise was used to explore possible facilities, furniture, or spatial barriers to teaching in a new way. The figures below show responses from this activity; this demonstrated the need for classrooms and support spaces that could enhance faculty members' ability to try project-based learning, flipped classroom lessons, and virtual training options.



DISCOVERY

STAKEHOLDER ENGAGEMENT

STUDENTS

Stantec conducted a Student Life Assessment, to understand how students at ACC use and view the campus. The Assessment consisted of an online survey, which 307 students responded to, and observations on campus to gain a deeper understanding of survey answers and validate the survey findings.

The survey asked about spaces students use on and off campus for indivudal or group work, and their favorite places to spend time alone or with others. They were also asked about the current places to buy food at ACC. Then students were given an opportunity to describe, in an open-ended format, the one major change they would make to ACC's campus and the way they would describe the campus to a friend who didn't attend ACC. The quotes shown here are student statements that reflect some of the most common sentiments expressed on the survey.

"More study spaces, besides the Library, where it's quiet... I need silence to be able to concentrate."

"[We] need a study room or break room free from the crowds.. It gets too noisy or busy in the common areas."

"I like to use the computer lab and the library for study spaces... However, these spaces become filled very quickly."

"It would be nice to have more cozy "nooks" on campus to relax or study outdoors."

Students' answers revealed a strong need for separation between quiet and social study spaces on the campus. Many expressed frustration that, when they were working somewhere quietly, others could arrive unexpectedly and create noise and distraction. Students also commented that the distribution of study spaces was not even across the campus - most clearly designated study areas are in the A or G Buildings, and group work tables were often taken by individuals.

"[Groups] have issues finding a place for everyone."

"There are only 4-6 rooms and usually they are taken, so it has gotten to the point where we may as well leave."

"[A coffee shop off campus] is our first choice, because of the WiFi and access to plenty of coffee and some snacks."

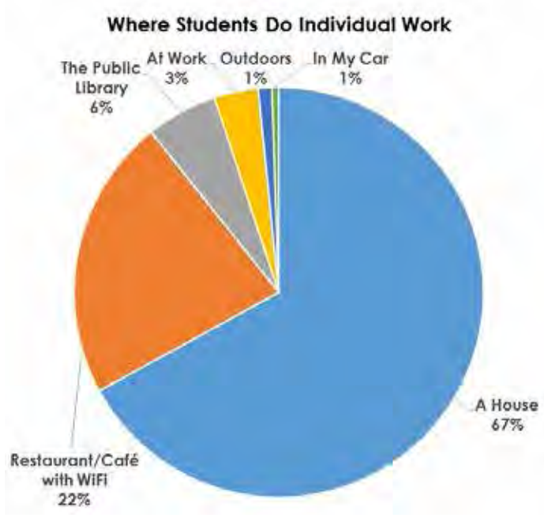
Students also expressed a desire for more collaborative group work spaces. Many students (51% of respondents) reported going to a cafe or restaurant to do group work. With tables, a lively atmosphere, WiFi, and food choices, these establishments provide the environment they were seeking, but not finding, at ACC. While the Student Center does have a cafe and eatery, many students reported that it is only open while they are in class - leaving them without access to food and coffee when they are ready to do group work.

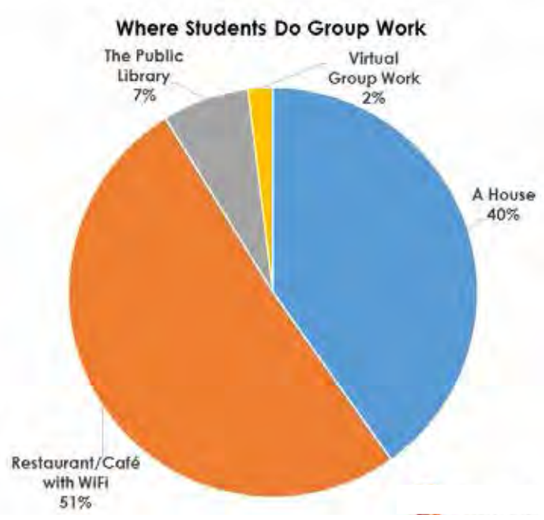
The figures below show the locations students currently choose to do individual and group work. It is clear that, for focused/individual work, they are choosing private areas where they can (usually) control noise and distractions. For gorup work, they are choosing comfortable home or social spaces that provide food, background noise/music, and comfortable furniture with tables.

"I love that we have an open campus and enjoy even just walking... to my next class."

"[I like] the courtyard; it's peaceful and I love the trees."

"I really love to study outside, so I want to have some place I can sit and study without being wet when it's raining."





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"[I would like] covered picnic tables in the grassy areas."

"Beautiful, green, open, trees, and benches. Great balcony. Butterflies, and little lizards. Peaceful and quiet."

There were several things that students had strong, positive reactions to on the ACC campus. First, students love the outdoor setting - especially the central courtyard, which contains the mascot dolphin fountain. They also enjoyed the covered sitting area behind G Building and the walking trail around campus. Students expressed a desire for more covered outdoor work areas with tables, so they can study or relax outside and enjoy the campus environment in all kinds of weather.

Finally, students had very positive opinions of the community and class size at ACC. Many of them stated that the sense of support from faculty and staff, along with one-on-one attention, was the best thing about the school. Students often described ACC as friendly and helpful, and the programs as quality.

"It's small enough to be a community."

"It is an amazing experience for someone who is trying to transition to college life. I really do love ACC."

These figures show the common elements and amenities that students are seeking in spaces they use. Their needs for social, energetic spaces are very similar to their needs for quiet or private spaces. They are also seeking comfortable furniture, especially tables to work at, food/drink options at more hours of the day, and a way to get in contact with the outdoor spaces ACC offers.